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JANUARY—MARCH, 1903

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NEW YORK

THE FORUM PUBLISHING COMPANY

125 East Twenty-Third Street

Paris Agency: Librairie Galignani, 224 Rue de Rivoli

50 Cts. a Copy [Vol. XXXiV, No. 3] $2.00 a Year

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THE FORUM.

VOL. XXXIV., NO. 3.

JANUARY—MARCH, 1903.

NEW YORK:

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The Forum

JANUARY, 1903.

AMERICAN POLITICS.

When Congress assembled on the first Monday of last December, to continue in session until the fourth day of next March, the Republican majority was in cheerful mood. The elections of the previous November had resulted in a Republican victory, after a campaign which, in its apathy, threatened for some time results adverse to the dominant party. The exchange of salutations on the first day of the session was, therefore, enlivened by sincere and mutual congratulations between the Republican members, and by the expression of hope that in the Presidential contest of 1904 the party might again be triumphant.

It is true that these utterances were not unmixed with fear. The Republican leaders realize that their victory last fall, while undoubtedly increasing the probability of continued Republican success next year, is by no means a certain indication. There are many rocks and shoals ahead. Serious problems present themselves; and, if they are not solved rightly, the American people will speak with no uncertain voice. At the same time, it is but natural to believe that the chances of success will continue with the Republican party. The readers of The Forum will remember that, in an article written last June and published in July, six months ago, I predicted that the Congressional elections would result in a Republican victory. It was easy to see, even at that time, that the Democrats were making no popular headway with their effort to force the Philippine question into the campaign; that the trust and tariff problems, being close to the people, would be the principal issues; but that, above

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all, the continued prosperity of the country would operate to prevent a change in political sentiment. The progress and outcome of the campaign confirmed all these predictions. The Philippine question dropped out of sight; the President, in his speeches in New England and the West, devoted himself almost exclusively to the consideration of the trusts and the tariff, which were the uppermost topics of the campaign; and, finally, when all the votes had been cast and counted, it was found that the Republicans had secured a majority of twenty in the next House. Now, looking ahead, it seems quite probable that the present momentum of the Republican party will not be checked by 1904. A Democratic victory last fall would have indicated that the political pendulum had reached its apex for the Republicans and was on the downward swing. Apparently, however, the retrograde movement has not begun.

The fact is that the American people, who have been suspicious and fearful of the Democratic party since 1896, have not yet reached the point where they again repose implicit confidence in that organization. The memory of 1893, when the country went through the valley of the shadow of death during a Democratic administration, is not yet effaced. There is still a fear that if the Democrats should obtain control of the government, the business interests would be menaced; there is still a feeling that it is best to let well enough alone. Candor compels the admission that there is some ground for this distrust. Somehow or other, the Democratic party fails to develop leaders who secure and retain the confidence of the people. The principal exponents of the two factions in the Democratic party to-day are Cleveland and Bryan, one of whom was repudiated by his former followers, while the other, twice defeated, is becoming less and less a factor in the political equation.

Recently Mr. Cleveland apparently attempted to reinstate himself in politics by writing a lengthy and characteristic letter to a New York newspaper. He preached a return to the Democratic principles which, he claimed, were the factors in securing Democratic victory when he was a Presidential candidate. Briefly stated, the principles are a revenue tariff, the curbing of monopolistic trusts, and opposition to aggressive expansion. However, when the details of Mr. Cleveland's administration are borne in mind, it is difficult to see how a return to the Cleveland principles can be of material benefit. There is a report current to the effect that Mr. Cleveland again desires the Democratic nomination, and that the business interests of New York are anxious to see him chosen; but Democrats who have the interests of their party at heart cannot

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forget how he disrupted their organization, and they will not be again willing to trust its fortunes to his obstinate direction.

And as Mr. Cleveland is not to be considered as a candidate, so Mr. Bryan must also be omitted from the calculation. He has had his day in court — his two days, as a matter of fact — and he has been found wanting. It would seem, too, as if his hold upon the people were waning. An Omaha dispatch to the "New York Herald," commenting upon Mr. Bryan's campaigning tour through the West, said that "not a candidate in whom Mr. Bryan was interested and for whom he spoke was elected." Mr. Bryan must also be excluded from consideration because, like Mr. Cleveland, he is the leader of a faction; and the Democratic party of the future, if it desires and expects to be victorious, must face the enemy with united ranks. If the Democratic party raises its banner in 1904 over merely a portion of its once superb organization, it might as well abandon the field without a struggle.

This being the case, it is worth while to look over the array of available Democratic candidates. The Congressional election went far toward clarifying the situation. It eliminated ex-Senator David B. Hill, who demonstrated his inability to carry his own State; it put a quietus upon the aspirations of Mr. Tom L. Johnson, of Ohio, whose candidates went down to defeat under an increased Republican majority. There was no decisive Democratic victory in any large State. In fact, the only substantial Democratic gain in recent years is to be found in Maryland; and this fact naturally centres attention upon Senator-elect Arthur P. Gorman, of that State, the man who led the Democratic party to its first victory after the close of the Civil War, whose parliamentary strategy and unwearying devotion resulted in the defeat of the Force Bill, and whose wise counsel in the Senate speedily placed him in the position of the leader of the Democrats in that body. Mr. Gorman's availability as a Democratic candidate in 1904 has already been sounded with clarion voice by Mr. Henry Watterson, of the "Louisville Courier-Journal"; and the echo of the announcement has been almost as resonant as the original utterance.

There is much in Mr. Gorman's favor — his steadfast adherence to his party, his long and valuable experience in national affairs, his tactfulness, judgment, and conservatism, and, above all, the fact that he has the confidence of the business interests of the country. He could carry New York, if any Democrat could; and while the South would support him enthusiastically because of his fight against the Force Bill, he is not so Southern himself as to arouse antagonism in the North. I share Mr.

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Henry Watterson's opinion that Senator Gorman to-day stands foremost among the men who are distinctly available for the Democratic Presidential nomination. It is, however, very doubtful if Mr. Gorman would enter a contest for the nomination, or accept it even if it came to him without a struggle. His personal friends know that he does not seek the honor, and that, on the contrary, he deprecates the mention of his name in connection with the Presidency. If he is not to be a candidate, the field is open, with a number of would-be starters, no one of whom stands preëminent. It is quite evident that, if Mr. Gorman is not available, the events of the next two years must evolve the Democratic candidate. Certainly no name now spontaneously suggests itself.

On the other hand, President Roosevelt will undoubtedly be the Republican nominee. The certainty of his nomination was long ago apparent to political observers, and the expressions of Republican newspapers since the election have made assurance doubly sure. In "Harper's Weekly," in the course of an article upon Mr. Roosevelt's leadership, the writer truthfully asserted that "the power of one man thus to cover his party with the mantle of his own strength is unprecedented in the history of American politics." The "Philadelphia Press" echoes these words; while many of the leading Republican newspapers unhesitatingly give the President the credit for the Republican victory in the fall elections. There is no doubt that his earnestness, his honesty, his frankness, his ability, and his picturesque personality made their impression upon the voters, and that popular admiration for these qualities contributed largely to Republican success. His courageous effort to settle the coal strike was characteristic, and was a most important factor in assuring victory for his party.

The elections were of interest beyond their relation to the Presidential campaign of next year. Take, for instance, the passing of the Populist. The word "Populist" has disappeared from the Congressional directory. A large proportion of the men who were identified with that party are now Democrats in name as well as in principle, while the Republicans who became Populists have returned to their former allegiance. In Kansas and Nebraska, where a season of bad crops and other misfortunes brought forth a harvest of Populists some years ago, the succeeding years of prosperity have smoothed the wrinkles on the brows of the discontented. The consequence is that the wild Populistic schemes for the establishment of the millennium do not now find fertile ground in which to germinate. There is more sanity in the West. People are

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too busy to listen to the exploitation of erratic propositions; and yet, not many years ago, the prophets of Populism were making converts with wonderful rapidity.

The rise and fall of Populism in the United States is a theme worthy of the historian of American politics. It has its dramatic and picturesque, as well as its pathetic and serious, sides. Populism compelled the retirement of the brilliant Ingalls from the United States Senate, and brought into public life Peffer and Simpson. Populism was largely responsible for the defeat of the Republican party in 1892, and for the schisms which came to the surface in the Republican and Democratic national conventions of 1896. It was all-potent in the West and played some part in the political conditions of the South; and yet it was not able at any time to impress itself upon national legislation. Its vagaries have been almost forgotten, and its devotees have arrayed themselves under other banners. In brief, it has almost entirely disappeared as an element in national politics. The question which remains unanswered, however, is: Has it been entirely eradicated, or is it merely latent? Unfortunately, the latter condition is more probable. As soon as hard times come again, we shall have the Populist with his wail of woe. He may not flourish under the same name — he was a Greenbacker before — but that he will nevertheless be abroad in the land is as certain as that human nature is human nature. Let us hope, however, that the evil day of his appearance will be long postponed.

With the disappearance of the Populist, the Western States are returning to the Republican column. There are fifteen States west of the Mississippi River, of which eight were carried by the Republicans and seven by the Democrats, four years ago. Last fall the Democrats carried not more than one of the fifteen. Colorado, Montana, and Idaho have returned to the Republican column; and in Nebraska the fusion of the Democrats and the Populists proved unavailing against the steadily increasing strength of the Republicans.

There is another significant and indicative phase of the campaign. The long continuance of the coal strike, with its consequent inconvenience and suffering, awakened a Socialistic trend of thought which finally found formal expression in the declaration of the New York Democrats, in State convention assembled, that the Federal Government should secure the ownership of the coal mines. It was but natural that this feeling should be stimulated by the conditions which existed. Hun-

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dreds of thousands of people, ready and willing to buy coal, found themselves completely helpless and between the upper and nether millstones of striking miners and unyielding operators. The situation was intolerable; and not only present relief but future avoidance seemed impossible if the conditions were to be allowed to continue without change. The effect of the coal strike upon the country from an economic and sociological point of view would, in itself, be an interesting study; but even from the standpoint of politics it must not be ignored. Immense gains were made by the Socialists in nearly every State. They saw their opportunity to make an impression, and they labored earnestly. Unusual efforts to win votes were exerted in Pennsylvania, New York, Connecticut, and Massachusetts, the great manufacturing centres of the country. In Pennsylvania, a Socialist State ticket was nominated and Socialist candidates ran in several districts. In the mining regions Socialistic exhorters nightly addressed enormous crowds. In New York the propaganda was also active, while in Connecticut the Socialist leaders worked in harmony with the labor organizations. The result of this industrious missionary work was seen in the figures of the election returns. In Pennsylvania, the Socialists' strength increased to 20,000 as against 5,000 at the last election; in New York the gain was over 100 per cent; and in Ohio, 200 per cent. The Socialist vote in Cleveland increased from 700 last year to 2,500 this year; Cincinnati's Socialist vote aggregated 5,000. In Chicago alone the Socialists polled 18,000 votes, while the Northwestern States gave evidence of the growth of the Socialistic sentiment in that section. Wisconsin showed a large increase. The Socialist vote of the whole State in 1900 was 7,000; and this year two counties, Milwaukee and Sheboygan, alone gave 12,000. In Minnesota the Socialist vote was about 12,000, a heavy increase; in Iowa the increase was from 150 to 200 per cent; in San Francisco there were 2,000 Socialist votes polled, as against 900 one year ago; and in Kentucky, Colorado, and Washington, the Socialist gains were also sufficiently large to attract attention. In fact, it is estimated that the total Socialist vote in the United States in the last election, when the figures are obtainable, will foot nearly 350,000. In 1900, Eugene V. Debs, the Socialist candidate for President of the United States, polled only 86,000 votes.

It must be admitted that the aggregate of the Socialist vote is still a very small proportion of the total suffrage of the United States; but this does not detract from the interest which attaches to the remarkable increases above mentioned. These point, in my opinion, to the growth of

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a political organization which will be the logical successor of the Populist party, and which is likely to attract to itself a following of considerable importance. If the trusts continue to increase and multiply without restriction; if they can monopolize the distribution of the necessities of life at arbitrary prices; if they can prevent the individual citizen from procuring beef, coal, sugar, etc., except under such conditions as they prescribe, and which may be prohibitory, there will be an almost universal demand for governmental interference. The citizen already chafes under some of the conditions which the trusts have imposed; and as there is now, and has been for many years, a growing tendency toward paternalism, fostered by questionable legislation, it is easy to see that many persons will look to government ownership as the only means whereby the desired relief can be secured. No student of political affairs can have failed to notice the frequency with which the phrase "Public ownership of public utilities" is being incorporated in party platforms. At first it was inserted with doubt and hesitation; but, at the present time, it is accepted without reserve. Such public ownership is a step toward Socialism, in the broad and accurate meaning of the term; and unless there be a check to the present monopolistic tendency of trusts, there will be a widespread demand for public ownership, or, at least, governmental supervision of every distributor of human necessity. Such a condition of affairs would be a serious menace to the stability of the Republic; and yet, because there is such a decided drift in this direction, the regulation of trusts becomes a question of supreme importance.

President Roosevelt has not at any time minimized the necessity of meeting this trust question and of dealing with it in a bold and determined manner. In his annual message to Congress, he placed the discussion of the trust question at the very beginning of the document. He believes in the widest publicity for all the details of trust operations; arguing that if the corporation is honest it need not fear to take the public into its confidence, while, if it is dishonest, it is not entitled to consideration. This, in brief, means public supervision, which is but a modified form of public control. He does not, however, content himself with this declaration, but says:

> I believe that monopolies, unjust discriminations, which prevent or cripple competition, fraudulent over-capitalization, and other evils in trust organizations and practices which injuriously affect interstate trade, can be prevented under the power of the Congress to "regulate commerce with foreign nations and among the several States" through regulations and requirements operating directly upon such commerce, the instrumentalities thereof, and those engaged therein.

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I earnestly recommend this subject to the consideration of the Congress with a view to the passage of a law reasonable in its provisions and effective in its operations, upon which the questions can be finally adjudicated that now raise doubts as to the necessity of constitutional amendment. If it prove impossible to accomplish the purpose above set forth by such a law, then, assuredly, we should not shrink from amending the Constitution so as to secure beyond peradventure the power sought.

The President would not, of course, go so far as to submit to Congress a bill specifically detailing the views which are thus expressed in general terms. There is, however, a willingness on the part of the Republican leaders in Congress to embody his suggestion in definite text, and a flood of proposed laws is the result. The bill which has attracted the largest degree of attention has been introduced by Senator Cullom, of Illinois, the chairman of the Committee on Interstate Commerce. The fundamental idea of Senator Cullom's bill is to bar the transportation of trust-made products from one State to another. The penalty for violations of the law is fixed at a fine of from $500 to $5,000. The bill authorizes the Attorney-General or any district attorney to make application to the federal judges for the summoning of persons before them to answer questions as to material violations of the anti-trust law, in advance of the trial of a case, and requires the judges to issue orders for the appearance of such persons upon this application. In such cases, witnesses are to be protected against prosecution, but they are to be deprived of the right to refuse to answer because of self-crimination. Annual reports are required to be made by all persons, firms, or corporations engaging in interstate commerce. They are to be filed with the Interstate Commerce Commission, and they are to be subject to the scrutiny of the Attorney-General, but not of the general public. The Attorney-General is authorized to appoint fifty special agents to seek out violations of the law.

This proposed law is so drastic that it is extremely doubtful whether it will be reported from the Committee on the Judiciary to which it has been referred. Its radical scheme has, in fact, already excited vigorous opposition even among those senators who believe that some legislation is necessary. Senator Hoar, the chairman of the committee, is opposed to it, although he has not as yet offered any substitute. Senator Cullom defends it upon the ground that the situation is one which can only be met by the most complete and thorough law which can be devised. Under the circumstances, many experienced observers believe that there will be no legislation affecting trusts at this session. The conservatives are so conservative and the radicals are so radical that it would not be

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strange if they failed to reach a reconciliation of their widely divergent views during a session limited in time and largely occupied with the consideration of appropriation bills which must be enacted. It is, however, probable that some compromise will be effected by the passage of some amendments to the Sherman Anti-trust Law which will add to the effectiveness of that statute. There is foundation for the belief that such action would meet with the approval of both the President and the Attorney-General.

It is safe to predict that there will be no tariff legislation during the present session of Congress. Interviews with some of the Representatives from the Northwestern States — notably Wisconsin and Minnesota, in which States tariff reform was an issue in the last campaign — indicate that they are anxious to modify the tariff schedules and would be willing to undertake the work at once. These Representatives are, however, in the minority. Even the President advises Congress to make haste slowly in dealing with the tariff, and he suggests the appointment of a commission of business experts

> whose duty it should be to recommend action by the Congress after a deliberate and scientific examination of the various schedules as they are affected by the changed and changing conditions. The unhurried and unbiassed report of this commission would show what changes should be made in the various schedules, and how far these changes could go without also changing the great prosperity which this country is now enjoying, or upsetting its fixed economic policy.

Congress does not take kindly to the suggestion of a tariff commission. The members of the Finance Committee of the Senate and of the Ways and Means Committee of the House, who are students of, and in some cases experts on, the tariff, look with disapprobation upon any effort which takes out of their hands the consideration of the schedules. They remember that many years ago, in President Arthur's administration, a tariff commission was appointed, and that its report, prepared after most exhaustive investigations, was received with the utmost indifference by Congress. It is easy enough to predict a similar reception for the work of any tariff commission. Jealousy of its own prerogatives may influence Congress in its rejection of the commission idea; but, whatever the cause, the result is not a matter of doubt.

It is not even likely that Congress will act upon the President's recommendation to abolish the duty on anthracite coal. It would be easy enough in the House to pass a measure restricted to this one item; but in the Senate, where the rules allow the widest latitude of action, the

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Democrats would prepare innumerable amendments and the whole tariff question would be opened. This is a contingency which the Republican leaders desire to avoid at this session. What may be done in the next session, or whether, in the absence of tariff legislation at this session, the President will call an extra session of Congress next spring, are questions which the future alone can decide.

My last review of the political situation dwelt with some emphasis upon the attempt of some Republicans in the South to create a White Man's Republican party. At that time the movement was gaining headway, and in more than one Southern State the Republican nominating conventions were conspicuous for the absence of negro delegates; the exclusion of the latter being defended on the ground that, as the negroes were deprived of their suffrage by amendments to the State Constitutions, their participation in politics was an absurdity. As the purposes of these anti-negro Republican leaders were more fully developed, intense opposition arose, and the President was drawn into the controversy. Several delegations of colored citizens waited upon him to ascertain whether he sympathized with or upheld the new movement. The situation finally became so acute that the President made public a letter written by him to a gentleman in Charleston, South Carolina, in connection with the appointment of Dr. Crum as collector of the port of Charleston, in which he made known, with characteristic clearness, his attitude toward the colored people of the South. He resented, with some indignation, the statement imputed to him that he would not appoint reputable and upright colored men to office. After asserting that he has not hesitated to appoint both white and black men to office, the President said:

> I do not intend to appoint any unfit men to office. So far as I legitimately can I shall always endeavor to pay regard to the wishes and feelings of the people of each locality; but I cannot consent to take the position that the door of hope — the door of opportunity — is to be shut upon any man, no matter how worthy, purely upon the grounds of race or color. Such an attitude would, according to my convictions, be fundamentally wrong. If, as you hold, the great bulk of the colored people are not yet fit in point of character and influence to hold such positions, it seems to me that it is worth while putting a premium upon the effort among them to achieve the character and standing which will fit them.

These declarations of the President have had the effect of suddenly checking the so-called "Lily White" movement in the South, and we may now look for a return to the conditions which have so long existed in that section. The Southern Democrats view this outlook with evi-

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dent gratification. Representative Bankhead, of Alabama, is one of the most prominent Southern Democrats who openly expresses his pleasure; asserting that as long as the negro is allowed to be identified with the Republican party in the South, just so long will the Democrats retain undisputed political control. Any one acquainted with conditions in the South must agree with Mr. Bankhead's view of the situation. This does not, however, concern the Republican leaders in the North. They regard the winning of the South to Republican principles as a chimera too fanciful to be entertained, so that nothing has been lost to them by the outspoken position of the President; while, on the other hand, the universal praise which the President has received from colored voters in the North assures to the Republican party the continued enthusiastic support of that contingent — a support that is essential in doubtful States.

One of the most unexpected and surprising incidents connected with the campaign was the action of General David B. Henderson, of Iowa, Speaker of the House. General Henderson had been nominated for Congress by the unanimous vote of his convention for his eleventh consecutive term, and his reëlection was hardly a matter of doubt, despite the fact that the Democrats had chosen ex-Governor Horace Boies as his opponent. After a conference with some of his friends, however, Gen. Henderson declined to accept the nomination, for the reason, as stated by him in his card of withdrawal, that there was a growing sentiment among his Republican constituents that he did not represent their views on the tariff question. Iowa, as is well known, has been for some time the storm-centre of a tariff revision sentiment; and Speaker Henderson, not sharing altogether the apparently dominating sentiment, declined to abandon his own convictions for the sake of continuing in Congress. His action naturally aroused widespread comment; and he was compelled to endure, for a time, the annoyance of criticism and misrepresentation. The election, by the normal majority, of the Republican candidate nominated to fill the vacancy caused by his withdrawal demonstrated that the district was in no danger of departure from the Republican column.

Speaker Henderson has been so prominent in Congressional life for the last twenty years that his retirement is a matter of national interest. He has filled the Speaker's chair for two Congressional terms with marked ability and impartiality, and he leaves Congress with the respect and esteem of all his associates. He will be succeeded by Hon. Joseph G. Cannon, of Illinois, at present the chairman of the Committee on Appropriations, and a man thoroughly fitted by long experience and

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demonstrated capacity for the high position to which he will be chosen. In view of the fact that in the next session the tariff question will be prominent, it is interesting to note that Mr. Cannon's public utterances lead to the conclusion that he sympathizes with Speaker Henderson's declaration that the trusts cannot be killed by applying free trade without also killing American industries.

The fight against reciprocity with Cuba, which was conducted successfully by the beet-sugar interests in the last session, is to be renewed with the same earnestness and persistence, but will proceed along different lines. It is now quite evident that no further effort will be made to secure in the Senate the passage of the bill adopted by the House; but the question will come before that body in the shape of a treaty with Cuba, which has not yet been negotiated, but which the President hopes to submit within a brief period. The ratification of this treaty is urged by the President with much emphasis in his message. He says:

> I urge the adoption of reciprocity with Cuba not only because it is eminently for our own interests to control the Cuban market and by every means to foster our supremacy in the tropical lands and waters south of us, but also because we, of the giant Republic of the North, should make all our sister nations of the American Continent feel that whenever they will permit it we desire to show ourselves disinterestedly and effectively their friend.

The opposition programme now contemplated includes a formal acquiescence in the Cuban reciprocity treaty, but, linked with this acquiescence, a demand that the Senate shall first consider the numerous reciprocity treaties which have been for some time pending in that body. These treaties have thus far met with considerable opposition, inasmuch as they provide lower tariffs on articles which come into direct competition with American manufactures. The French treaty, for instance, menaces the silk manufacturing industries, while the treaties with the British islands in the West Indies arouse the opposition of the California fruit growers. It would seem that, if the fate of the Cuban treaty is to be made dependent upon the ratification of these other treaties, no action will be reached during this session. At any rate, the opponents of reciprocity may be relied upon to throw every obstacle in the way of final agreement.

The probability is, also, that the ship subsidy bill will die in the House. Indeed, the general consensus of opinion in Congress is that the work of the session will be almost entirely confined to the passage of the appropriation bills.

HENRY LITCHFIELD WEST.

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FOREIGN AFFAIRS.

THERE has never been a time within the recollection of the present generation when the people of two countries so cordially detested one another as do the English and the Germans. In both countries the feeling is widespread. In Germany officials and newspapers of the highest standing have not hesitated to give expression to their animosity. In England the speeches of members of the cabinet have contained sneers at Germany; and the newspapers do not scruple to express their belief that to-day Germany is the power most to be feared by Great Britain.

In England there is no yellow press such as we know in the United States, and such as has made France infamous. Papers like "La Lanterne," "L'Intransigeant," and "La Libre Parole," gutter sheets that the *boulevardier* delights in, which are always seeking an opportunity to cast abuse on England, are unknown. It is, therefore, all the more remarkable when serious papers, "The Times" among the dailies, "The Spectator" among the weeklies, and "The National Review" among the monthlies, are rabidly anti-German. The editors of these publications consider it their duty to warn the country of the attempts being made by Germany to entangle England into an alliance, the purpose of which is to isolate her from the rest of Europe, after which event it will be possible for the Berlin Government to deal with England as it may see fit.

Apparently the King of England and the German Emperor are doing their best to preserve peace, to allay the friction, and to restore the *entente cordiale* that formerly existed between the two countries. But they have been unable to stem the rising tide of national bitterness. The German people regard with ill-concealed irritation the friendship shown by the German Emperor to his English relatives and to Englishmen of distinction. The conferment of the order of the Red Eagle on St. John Brodrick, the British secretary of state for war, when he attended the recent army manœuvres, aroused a storm of protest in England, and made Mr. Brodrick the target for gibes and sneers from the press. He was severely criticised for his acceptance of the decoration,

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and the newspapers asked by what right a member of the British cabinet accepted favors at the hands of the German Emperor.

What the British appear to fear more than anything else is that the German Emperor, who is one of the ablest men in Europe and one of its shrewdest politicians, will induce the British Government to form a secret alliance for defensive and offensive purposes. The English newspapers know only too well that the present British cabinet is one of the weakest that has been entrusted with the destinies of the Empire for the last half century. No member of that cabinet has a comprehensive knowledge of foreign affairs. Lord Salisbury was guilty of some remarkable indiscretions as premier and secretary of state; one of the most remarkable being the conclusion of the Anglo-German alliance relating to China, which he undoubtedly believed would strengthen British influence in the Yang-Tse valley and operate as a check to Russian designs in Manchuria, but which had no other effect than to increase German prestige at the expense of England. Why that treaty was concluded by Lord Salisbury is a mystery that has never yet been cleared up.

But despite Lord Salisbury's constitutional aversion to trouble, his weakness for always yielding when forced into a corner, and his general cynical indifference, he was a master of European politics. His successor at the Foreign Office, Lord Lansdowne, has many of the elements of weakness that characterized Lord Salisbury, without having his broad knowledge. Mr. Balfour, the prime minister, has never made a study of foreign affairs, and consequently does not exercise a restraining check upon the Foreign Office. Perhaps, therefore, it is not surprising that the English newspapers again fear that their birthright may be bartered for a mess of pottage.

If the British view is to be believed, the position of Germany at the present time is precarious. Nominally she is a member of the Triple Alliance, and the powers composing that alliance — Germany, Italy, and Austria — are supposed to act as the counterpoise to the Dual Alliance of Russia and France, to be able to maintain in equilibrium the balance of power in Europe, and, by checking the ambitious designs of Russia on the one side and France on the other, preserve the peace. English statesmen affect to believe that the Triple Alliance exists now in name only, and is merely a paper creation. It is a fact that, although Italy is a member of the *triplice*, she has during the last year cemented her relations with France, and is now on better terms with that country than for many years past, while the loyalty of Austria, because of her Balkan interests, has always been more or less under

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suspicion in Berlin. That being the case, the English view is that Germany's position is decidedly shaky, and that it is very natural that she should want the benevolent assistance of England, should she at any time find herself attacked on her flanks by either Russia or France, or perhaps both, and wake up to make the discovery that Austria and Italy, instead of lending their material support, were at best only sympathetically neutral, and perhaps under the surface secretly inclined toward her enemies.

"The Spectator," for instance, asks whether it is worth while for Great Britain to accept German overtures. That question "The Spectator" emphatically answers in the negative, and this from a purely selfish standpoint. Germany, says the leading weekly of England, is not in a position to give Great Britain anything that she requires. Her conduct in the past has been disloyal and therefore does not entitle her to confidence; and association with her would be bad politics for England, because it would compromise her relations with the other powers.

Therefore, "The Spectator" sums up, nothing is to be made by an alliance with Germany. On the other hand, is anything to be lost by rejecting this alliance? "The Spectator" believes not. All during the South African war Germany was intensely hostile to England. That hostility was shown in every possible way. The most brutal and most indecent cartoons were permitted to be published in the German newspapers. The Queen and other members of the British royal family were foully slandered. Everything that could be done to arouse hatred against the British army was done. Newspapers, not the comic papers, but the so-called serious papers, printed pictures showing the British soldiers hiding behind women on the veldt, and British officers skulking behind their men. The legends under these pictures were: "A typical South African war scene," "How the British fight in South Africa," and other similar phrases, to create the idea in the mind of the German peasant and Germans generally that these were actual scenes photographed or drawn on the field of battle by the paper's special correspondent. Owing to this newspaper propaganda, a propaganda carried on with the most intense zeal throughout all Europe, with possibly the single exception of Austria, whose Emperor had a profound admiration for the Queen, the mind of Europe was poisoned against England; and this had much to do with the popular belief that the English were fighting in South Africa like a horde of savages, and that every rule of civilized warfare was wantonly violated.

The rôle of Germany at the present time is the rôle of Mephisto, if

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English fears are to be believed. With shrewd and subtle cunning Germany is doing her utmost to detach England from her friends, and make her condition so perilous that for self-protection she will be forced into a German alliance. This is what the British press fears more than anything else, and is trying to prevent by creating such an adverse public sentiment that no British ministry would dare to run counter to the expressed opposition of the country. To illustrate the press campaign being carried on in both countries, it is only necessary to cite a few quotations. A writer in "The National Review" says:

> There is nothing malicious in the suggestion that Germany acts as an *agent provocateur* between London and St. Petersburg. Prince Bismarck himself gloried in the rôle of "the honest broker," while the most influential and responsible of German organs habitually discuss the relations between England and Russia in the spirit of the *tertius gaudens*. Englishmen are not yet prepared to go so far as the distinguished ancestor of our present foreign minister, the first Marquis of Lansdowne, better known in history as Lord Shelburn, who, in March, 1787, used these remarkable words in the course of a speech in the House of Lords: "The natural enemy of Great Britain, my lords, and equally of every other state, is the sovereign of Prussia, who maintains an immense military force, altogether disproportionate to his revenues and his dominions."

Sir Horace Rumbold, who recently retired from the post of British ambassador to the Austrian court, uses this remarkable language, doubly remarkable as coming from an ambassador on the retired list: "The Germans, it remains my firm belief, continue to be potentially our most unrelenting and dangerous foes." The editor of "The National Review" says: "We say without any fear of contradiction that if the project of an Anglo-German alliance, or of anything remotely resembling it, were submitted to British public opinion either at home or in the colonies, it would be rejected by an overwhelming majority, and its promoters would become discredited." He quotes an extract from a speech delivered by the leader of the National Liberal Party in the Reichstag, who said: "In our attitude towards England we must keep cool, and until we have a strong fleet it would be a mistake to let ourselves be drawn into a hostile policy towards England." "The National Review" infers from this language, which it believes expresses the ideas of the Kaiser, that when Germany has a sufficiently strong fleet she can throw off her mask and reveal herself as the enemy of England. "The Morning Post," quoting from the preamble of the latest German naval act, finds a clear and direct challenge to England in these words: "Germany must have a fleet so strong that a war even against the greatest sea power must be so dangerous to that power as to threaten its position as a great power in the world." In other words, Germany is striving

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with feverish haste to be able to match England on the sea, so as to meet her on even terms, and be in a position to check her ambitions.

On the other side of the North Sea we find the newspapers equally as bitter and equally as anxious to inflame public opinion. The Berlin "Kreuz Zeitung" openly charges "The National Review" with striving to bring about a war with Germany in the near future. It quotes what "The National Review" says in opposition to a *rapprochement* with Germany because it would imperil the safety of the Empire, and sneeringly asks whether these outpourings are the words of a rational people. There is much more of the same sort; and "The National Review" is told that whether England likes it or not, Germany will continue to build her fleet for her own protection. Other German papers are equally as defiant. It is England and not Germany, they tell the British press, that is isolated. Germany, they say, can get along very well without the help or assistance of any other power; but Britain is constantly menaced by her enemies, and it is Britain who must have friends unless she is to go down to destruction.

The German navy, at the present time, is the English nightmare. The English papers are full of elaborate articles showing that Germany is carrying out her shipbuilding programme so fast that in a few years she will hold the balance of power between England and the Dual Alliance. This means, of course, that at the proper time, and in case of strained relations between England and France and Russia, the German Emperor can step in and make his own terms. The German writers, on the other hand, do not hesitate to say that the German fleet is directed not against France, or Russia, or the United States, but is to be used against Great Britain. This is the frank declaration of Prof. Theodor Schiemann, a noted contributor on foreign politics to the "Kreuz Zeitung," which is the recognized organ of military opinion in Germany. According to one British view, in 1906 Great Britain will have fifty-two battleships of over 10,000 tons, while France and Russia combined will have forty-two, and Germany will have eighteen. In other words, if Germany should join hands with France and Russia, England would have eight battleships less than her rivals; if Germany should form an alliance with England, the allies would have twenty-eight more battleships than France and Russia. According to the German official explanation, the increase of the German navy is to protect her colonial possessions. Of course, this explanation misleads no one. Germany at the present time has practically no colonial posses-

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sions, and what few she has do not need an enormous navy for their defence. Dr. Schiemann is more honest than his Government. He bluntly brushes aside this subterfuge of colonial defence, and pointedly declares that England has thwarted German aspirations in Africa and Asia, and that it is the duty of Germany to have a navy sufficiently strong to enable her to act on the offensive or the defensive as circumstances may require.

For some years past England's naval strength has been predicated on the theory that she must have a fleet superior to the combined fleets of any two nations. The British navy was based on the force that France and Russia could put on the seas; the theory being that Germany was a friendly neutral, and that in the British naval strategy she need not be considered. The English newspapers now declare that this theory must be abandoned; and it becomes evident that from now on the British naval policy will be founded on the principle that England on the sea must be stronger than the fleets of any three allied powers. This means, of course, an enormously increased burden on the British taxpayer, and a large additional appropriation for the support of the navy; but, from all that can be gathered from English newspapers, the country will not grudge whatever may be required to maintain the navy's preëminence. The Teutophobes are demanding not only a large increase in the number of battleships, but also the building of new dockyards; because as one writer pointedly remarks, "We have not a single repairing dockyard on our Northern coast." These dockyards on the Northern coast are advocated in view of a war with Germany.

As Germany is regarded as the national foe, the English now look with more favor on Russian aspirations, and consider it politic to encourage friendly relations with the Colossus of the North. Until recently it was a cardinal tenet of the Conservative faith that Russia must at all costs be kept out of the Dardanelles, and therefore it is somewhat surprising to find the leading exponent of Conservative principles, "The National Review," saying:

> We are disposed to doubt whether the closing of the Dardanelles to Russian warships is as primary a British interest as it is supposed to be in some quarters; while, looking to the future, the closure can hardly be regarded as a permanent condition.

Referring to the construction of the Bagdad railway, which German capital hopes to build, "The National Review" says:

> But of this, at any rate, we are convinced — namely, that the construction of the Bagdad railway, with the inevitable terminus on the Persian Gulf, would be a seri-

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ous detriment to British interests, and we cordially hope that Russian opposition at Constantinople may succeed in frustrating this enterprise.

A few years ago no influential British writer would have openly pronounced in favor of any Russian claim in Asia; no British writer would have dared to suggest that the Empire would not be in jeopardy if the Dardanelles were open to Russian ships of war. There is, of course, still a suspicion of Russia entertained in England; and the aims of the two countries are so antagonistic, and conflict with each other at so many points, that it seems inconceivable that they can ever be genuinely friendly. Still, it is significant of the change of relations to read what has just been quoted; and unless Germany is careful she may bring about an understanding between Great Britain and Russia which would be awkward for herself.

Taking a broad view of the future, one can see why this well-founded belief exists in so many quarters, a belief as deeply rooted in the United States as it is in Great Britain, among naval men especially, and some clear-headed thinkers, that the next few years may see Germany plunged in war. Germany's future is in a measure precarious, menaced as she is both by Russia and France, and having incurred the ill-will of England. But even more menacing than the rivalries and jealousies of her neighbors is domestic discontent.

To-day Germany is one of the great commercial powers of the world, next only to Great Britain and the United States. In the trade of the world she has proved a keen competitor to England; in some directions, especially in South America, she has supplanted her former great rival. There are economists who believe that if Germany meets with no check during the next two decades, she will supplant England in the race for commercial supremacy, and will be exceeded by the United States only.

Germany, however, is still a comparatively poor nation, and has been doing an enormous business on narrow capital, with the result that always follows when an individual has put the bulk of his capital into fixed investments, and cannot keep a sufficient amount of it in a fluid state and readily available. More than once during the last few years Germany has narrowly escaped a panic. This condition of things is due solely to the fact that capital has been locked up instead of being kept free to respond to the varying demands of trade. Germany has also sent money out of the country that might better have been kept at home. Being a world power, she has been bitten by the craze to be a

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factor in the world's finance. She has floated foreign loans and invested money in different quarters of the world. Rich countries with a surplus of capital greater than immediate needs — countries like the United States, Great Britain, and France — can afford to seek outlets for their surplus capital in foreign investments; but this cannot be done by a country, like Germany, that has no great reserves on which to draw. The Germans are habitually regarded as a cautious and thrifty race. They are; but in business matters they have somewhat lost their caution of recent years. They have plunged almost recklessly into industrial enterprises of every character. In Germany, as in the United States, there has been a craze for the formation of joint-stock companies and the amalgamation of individual establishments into "trusts." Some of these trusts, like those on this side of the Atlantic, have not justified the sanguine predictions of their promoters. Great sums have been locked up, and cannot be realized upon in case of stringency.

Germany, to carry on her operations, must borrow money; and practically the only countries in which she can float her loans are the United States and Great Britain. There still exists a prejudice in France against German investments, and Russia is so heavy a borrower that she has no money to spare for outside purposes. If a German loan were to be placed on the London market to-day it would fall flat. In the present temper of the English people, they would regard it as unpatriotic to lend Germany money.

But, perhaps, even more embarrassing is the domestic political situation; and it is this political conflict that really threatens Germany's future. The Reichstag will be dissolved next year, and we shall witness a tremendous struggle between the socialists and the centrists. The socialists claim that they are the party of progress; that every effort made to elevate society and to emancipate Germany from mediæval tradition has met with the opposition of the Catholics, who have received the secret support of the Protestants; and that therefore it is necessary for the socialists to war upon clericalism. It is the party of the centre that is supporting the tariff; it is the socialists who are opposing it, and who believe that in the coming election the cry of the dear loaf and of heavy taxes imposed for the benefit of landowners and manufacturers may prove as potent in winning the election as it has sometimes proved in the United States. The Reichstag is split up into groups and factions, and it seems impossible to combine them into cohesion.

It is possible to anticipate a condition of affairs in Germany, both economic and political, that might lead to such serious results that the

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only way to distract public opinion would be to arouse the national spirit either by avenging a fancied insult to the national honor, or at least by a threat to make war. In that case Germany might once more become united, and socialists as well as clerics might forget their differences in the face of the common foe. The socialists oppose war because they oppose great standing armies, which they believe are maintained to support the power of kings and the aristocratic classes, which would be broken if it did not rest on force. But the German is devoted to his fatherland. He is proud of his country and can be animated by an intense zeal, as the history of Germany has always shown. The average German, perhaps, welcomes war no more than does the average man in America; but in Germany, as in the United States, a call to arms would meet with instant response. Confronted with the alternative of facing disaster at home or retrieving disaster by the hazard of war, there are people who believe, from a careful study of the character of the German Emperor, that it would not take him long to reach a decision.

When the German Emperor went to England, in the early days of November, to visit his uncle King Edward, it was the general belief among public men, both in Germany and in England, that something more important than social relaxation caused him to make the visit. Just what he hoped to accomplish was not revealed, and at the time of writing no official information has been made public. The British newspapers feared that he was trying to entangle his uncle into an alliance; but one may venture the suggestion that he was too wise to attempt that, although willing enough to improve the opportunity to try to ascertain England's intention in regard to the Persian Gulf, where three great nations — England, Russia, and Germany — are watching one another's every move.

Russia wants to build a line through Persia to the Indian Ocean, which would checkmate British plans. It is part of the British policy to connect Europe with India by a railway system. England has been anxious to reach an agreement with Russia in regard to Persia, although English writers have repeatedly pointed out that for England to permit Russia to obtain a foothold on the Persian Gulf will be to imperil her own military position in the Far East, weaken her hold on India, and lose her commercial supremacy to Russia.

England's purpose in linking her Indian empire with Europe is political as well as commercial. The contemplated railway would open up a great and rich territory now almost inaccessible because of the

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lack of communication. The trade of Persia is carried on through Caucasia and Transcaspia in the north and the Persian Gulf in the south. The northern routes are in the hands of Russia, while England has always been predominant in the Persian Gulf. Russia tried to secure the concession from Turkey for the building of the Bagdad railway; but the Germans managed to cut the ground under her feet; and the declared purpose of England to extend her Indian road to the eastern boundary of Beloochistan, and thence through Persia to the Gulf, was another blow to Russia. The building of this road in a measure threatens Russia's position in Central Asia, and will bring under British control markets now monopolized by Russia. What both England and Russia want is to obtain from Turkey Koweit, at the northern extremity of the Persian Gulf, which is the terminus of the projected Persian railway. If England were in possession of Koweit, her position would be enormously strengthened, as it would give her a commercial as well as a military base, and afford her a valuable naval station. The Sultan of Turkey, however, with his usual shrewdness, and pursuing his customary policy of playing one European power against another, has not ceded Koweit to either Russia or England; but a British fleet is constantly hovering in the neighborhood, and would probably seize it at once should the British Government believe that it was in danger of falling into the hands of Russia. For the present, however, that is not imminent.

Germany has great and ambitious designs in Asia Minor. What more likely than that one of the purposes of the German Emperor's visit to England was to try to make some sort of a deal with England, whereby Germany might be permitted to pursue her ambitious designs in Asia Minor without meeting opposition from England, and in return the German Emperor might promise his support in case Russia should raise objection to England's policy in the Persian Gulf? This, of course, is only surmise, and naturally must be; but it is probably not without the mark. Germany is more interested in Asia Minor at the present time than in any other quarter of the globe; and it is the belief in Germany that larger commercial prizes are to be drawn in Asia Minor than elsewhere. Germany's colonial ventures in China have not been a success, and have not proved commercially profitable. Her African possessions are practically of little value. In South America she has found large and profitable markets; but the drawback to her South American policy is that she cannot colonize there, and cannot acquire territorial possessions, because that would be an infringement of the Monroe Doctrine, which the United States would not permit. The

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place that offers the greatest hope of success is Asia Minor; and there is every reason to believe that, to be placed securely in possession, the German Emperor would be willing to make favorable terms with England. It does not necessarily follow that he is not also coquetting with Russia. In the end he will probably make the bargain that is best for himself.

The presence in London of King Charles of Portugal, coincident with the visit there of the Emperor William, has also been interpreted by statesmen to mean something more than a mere friendly exchange of courtesies between the reigning monarchs of England and Portugal. A traditional friendship exists between the English and the Portuguese, and during the last few years the British Government has sedulously cultivated this friendship. This was not dictated solely by altruism. The possession by Portugal of Delagoa Bay made it extremely important, during the South African war, that Portugal should preserve neutrality; and although it was freely asserted that the Portuguese authorities in South Africa were friendly to the Boers, and that ammunition and other warlike supplies found their way into the Transvaal and the Orange Free State through Delagoa Bay, yet on the surface the Portuguese faithfully adhered to their declaration of neutrality, and prohibited the importation of the things of which the Boers were most in need.

Eventually Delagoa Bay must fall into the hands of the British. It is the one chink in their armor in South Africa; and its possession by a foreign power, even though that power be as weak as Portugal and as well disposed to Great Britain as she is, is still a constant menace to British rule in South Africa. Germany would give a good deal to be placed in possession of Delagoa Bay; but it is inconceivable that a British cabinet would permit Germany or any other power to obtain that valuable harbor unless forced to do so as the penalty of unsuccessful war. It has always been believed that Great Britain has a reversionary interest in Portugal's African possessions, and that in case Portugal should find it necessary to dispose of her property in South Africa, England would be given the first opportunity to make a bid. Whether a formal treaty or understanding exists between Great Britain and Portugal is not known; but that belief is generally entertained in the chancelleries of Europe, and Germany would not be permitted to obtain Portuguese territory unless she were willing to hazard the risk of war. In fact, so far as Africa is concerned, England has created a sort of Monroe Doctrine. No other power may colonize except with her per-

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mission, and other European nations whose flags now fly in Africa may not alienate their territory or disturb the existing equilibrium without the permission of Great Britain. In the British scheme of empire, Africa is too important a link, both of communication and defence, and especially with regard to India, for any chances to be taken.

Germany's political intrigues have more than a passing interest for the United States at the present time. If the secret history of the Danish West Indies treaty negotiations were ever published, it would probably be discovered that Germany had a very large finger in that pie. One is inclined to ask why Denmark, after having apparently welcomed the thought of ridding herself of the incubus of the Danish West Indies, should suddenly discover that they were of value to her, and defeat the treaty. The answer might be that Germany was possessed of sufficient influence at Copenhagen to bring about a reversal of sentiment. Nor would it be difficult to discover her motives. Germany, in addition to seeking a foothold in South America, is extremely anxious to obtain a *point d'appui* in the Caribbean Sea; and the only place in which she can plant her flag is the Danish West Indies.

Germany — that is, official Germany — knows only too well that the Monroe Doctrine keeps her out of the Caribbean exactly as it keeps her out of South America; and Germany, of course, is not going to try conclusions with the United States to test the validity of the Monroe Doctrine, because at the present time she is perfectly well aware of the fact that she cannot wage successful war against this country. What may happen in the future, say six or eight years hence, when Germany on the sea will be more powerful than the United States — that is, unless the United States greatly increases her navy — no one can tell; and "the future not being born, we will abstain from baptizing it," to quote Meredith. For the present, Germany undoubtedly regards diplomacy as a more powerful weapon than battleships; and it must be admitted that so far she has made her diplomacy triumphant.

Germany gains two things by preventing the transfer of the Danish West Indies to the United States. So long as St. Thomas and the adjacent islands are under the Danish flag they are not in the possession of the United States; and in statecraft, as well as in some other things, much may be gained by delay. No one knows what may happen in the course of a few years. Undoubtedly, next to owning the islands herself Germany prefers to see no change made in the proprietorship.

But there may be another reason why Germany regards the existence

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of the *status quo* as in her favor. That she would like to absorb Denmark into the German Empire is not open to question. There are people, of course, who insist that such a thing is absolutely impossible, not because of any opposition in Germany, but because the Danes are too bitterly hostile to Germany to become Germans. They have not forgotten the seizure of Schleswig-Holstein. But that, after all, is the past. Remembering the close dynastic ties existing between England and Denmark, and England and Germany, it is not a fanciful stretch of the imagination to conceive that the German Emperor may be trying to induce his uncle to use his influence to create a sentiment in favor of Denmark's becoming part of the German Empire. Emperor William is perhaps not unwilling to pay for this service; but exactly what he can offer to England is not apparent at this moment.

Supposing Denmark should be merged into the German Empire, what then becomes of Denmark's West Indian possessions? The obvious answer would be that they would follow the flag. That would be a transfer of sovereignty from one European power to another. A transfer of sovereignty in the waters of the New World would be a violation of the Monroe Doctrine. Would the United States so regard it in the circumstances? An extremely interesting question would be raised if that should happen, and a question that might not be so easy of solution, especially if at that time, as already suggested, Germany possessed a navy superior to that of the United States, and felt that she could afford to disregard the warning of the latter country. That is a phase of the Danish West Indian negotiations that has been given some thought by men whose business it is to give serious consideration to the question.

The departure of Mr. Chamberlain, the British secretary of state for the colonies, for South Africa is the great political sensation of the last three months, not only in England, but in a scarcely lesser degree throughout Europe. It is the first time that a member of the British cabinet has ever gone on a mission of that kind, and it naturally affords abundant food for speculation. Some of Mr. Chamberlain's political opponents believe that he has gone to South Africa for electioneering purposes; but probably the real reason is that he is making the trip to try to untangle some of the snarls which have arisen out of the maze of the South African war, a war that appears to have left a good many things still to be settled.

Whether Lord Milner, the high commissioner and governor of the Transvaal, is a great man or a blunderer depends on the point of view.

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The pro-Boers have always contended that, had Lord Milner shown more prudence, more conciliation, and more tact, the war might have been avoided, and that one reason why the Boers were so stubborn about making terms was the knowledge that they would have to deal with Lord Milner, whom they bitterly detested. For Lord Kitchener they had not only unbounded respect, but, as the sequel showed, really a personal liking. They never could be induced, however, to look upon Milner as their friend or to believe that he was able to overcome his prejudices. The London "Daily News," the leading organ of the pro-Boers, says about the high commissioner:

> Lord Milner cannot forget or forgive. A new class of human beings has been invented, under the title of "undesirable," and because this petty satrap does not "desire" their presence, hundreds of brave and honest men are to be kept away from their native land.

The "Daily News" charges that he is controlled by his master-passion — hatred of the Boers — and that neither treaty nor pledged word stands between him and his purposes, which is pretty severe language for an English newspaper to use about an English official. On the other hand, friends of Lord Milner believe in him not only as a man of the most commanding ability, but as a man who does not cherish resentment, and whose hope and ambition is to see a reunited South Africa and to wipe out as quickly as possible the bitter memories of the past.

There are problems so great yet to be settled in the Transvaal that they might well stagger a man even of Mr. Chamberlain's extraordinary vitality and ability in dealing with great and difficult questions. There is not only the problem of bringing Boer and Briton together once more and inducing conquered and conqueror to live side by side on terms of friendship, but there are great economic questions pressing for solution. One of the most difficult is that of the supply of labor in the mines of the Rand. What the Transvaal needs to be prosperous and to efface the scars of the last three years is labor to develop the mines, as well as the farms, and to build up the cities. There is native labor to be obtained in almost unlimited quantities; but the trouble is that the Kaffir is by nature and hereditary influence an agriculturist and not an artisan. He will feed his flocks and herds, but he will not be a hewer of wood or a drawer of water. Like his fathers before him, he wants to be a tribesman, and not to work in the mines. Lord Milner has proposed that the blacks be forced to work by taxing them so heavily that they will have no other alternative. A suggestion has been made that Chinese be im-

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ported into the colony; but this has aroused such a fierce storm of opposition that it is not likely to be done. There has been talk of inducing Englishmen to emigrate and settle in the Transvaal; but so far little headway has been made in this direction.

The cost of the war, so the enemies of Lord Milner assert, he proposes to saddle on the colony. Naturally this has raised a great outcry. Whatever money the Transvaal can raise, its people say, ought for some years to come to be expended for the benefit of the colony in building railroads, in public works, in irrigation, etc. It will be folly, they say, to rob the country for the sake of Great Britain, instead of developing it so as ultimately to make it rich and prosperous. And then, in addition to all other things, it must be remembered that there are now in South Africa two races and two languages — the Boers, who cling to their native Dutch; and the British, who talk English only and would like to see Dutch forgotten as quickly as possible. It will be seen from this what a formidable task confronts Mr. Chamberlain. But even Mr. Chamberlain's most bitter political opponents believe that he is the one man able to restore order out of chaos, and to bring about a state of affairs that will be for the advantage of the Empire. Much as Tories and Liberals dislike Mr. Chamberlain and detest him for his apostasy, they are forced to admit that he is a man of extraordinary parts, and they regard him as the one member of the present cabinet who rises above mediocrity.

An official publication recently issued by the French minister of finance shows the enormous accumulated surplus capital of the French people; and it will, I imagine, be a surprise to most people to learn of the large investments of French capital in foreign countries. According to this statement, France has invested outside of the country $6,000,000,000, of which $1,240,000,000 are in Russia, $600,000,000 in Spain, $575,000,000 in Austria Hungary, $300,000,000 in Italy, $300,000,000 in British South Africa, nearly the same amount in Egypt, $200,000,000 in England, and the rest scattered in different quarters of the world, including the United States; but the French investments in this country are so small compared to the others that they are not deemed worthy of separate mention.

The very large sum invested in Russia makes it absolutely certain that the relations between the two countries must continue to remain on the most friendly footing. The great financial stake of France in Spain makes it equally certain that the Republic will keep a watchful

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eye on its southern neighbor, and for its own protection will adopt measures, if they are necessary, to prevent an economic as well as a political crisis there.

Most of the French foreign investments are in the form of Government loans; but a considerable portion of the money is invested in industrial enterprises, the contributions to which come from all classes of the people. This wide distribution is one of the best guarantees of peace. War or political disturbances would threaten the security of these investments, in which are to be found the savings of the peasant as well as the surplus capital of the great landowner and manufacturer. No French ministry would hazard the risk of having these national investments swept away by the uncertain chances of war.

The other side of the French balance sheet, however, is less satisfactory. France at the present time is confronted by a deficit, in round figures, of $40,000,000, to which must be added an almost similar deficit carried over from the year before. M. Rouvier, the minister of finance, is trying to do everything within his power to curtail expenditures so as to make them more nearly equal to receipts; but thus far he has been unsuccessful and the immediate outlook is not promising. France has tried the dubious experiment of increasing taxation, only to discover that there is a limit to the tax-paying powers of the people, and that when that limit is reached an increased burden of taxation, instead of producing an increased revenue, fails of its purpose. France continues year by year to add to her expenditures for the support of her army and navy so as to keep pace with her European rivals; and these increasing expenditures for military purposes are largely responsible for the present embarrassing position of the minister of finance. It is difficult to say what can be done to turn the deficit into a surplus, unless France should be willing to cut down the appropriations for the army and navy; but in the present state of European politics that seems impossible.

A. Maurice Low.

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FINANCE.

To comprehend the remarkable events of the last three months of American finance, it is necessary to review the position of affairs both at the beginning of the period and at a date three months farther back. It was pointed out in these pages, while discussing the situation of the early summer, that misgiving as to the future had spread throughout the financial community; the causes of that doubt being, first, the continuous expansion of bank liabilities throughout the country, without an equivalent expansion of resources; second, the spirit of speculation, which was fostering unprecedentedly high prices, in the stock market and elsewhere; and third, at that moment the most weighty cause of all, uncertainty as to the outcome of the season's harvests. Three months later it was shown in these pages that the harvests had, on the whole, turned out abundant, and that, although the drain on bank reserves had not been arrested, the feeling of the financial community had been transformed from pessimism to something like reviving hope.

Events since the autumn money market was fairly opened have justified the misgivings of May and June rather than the hopes of August. What we have learned from subsequent occurrences is this, that, while a harvest outturn still holds first place as the governing influence in finance, nevertheless it is possible so far to anticipate a harvest's benefits that the maturing of the crops and their movement to a profitable market may seem to be without effect. There are homely illustrations of this principle. It is quite conceivable that an individual may live for months in reasonable expectation of a fortune coming to him; that the expected wealth may, in fact, be delivered at the appointed time; and that, nevertheless, he may have borrowed and spent such sums of money in advance, reckoning on his later ability to pay, that the money which eventually comes to him will be used up instantly in the contracted settlement with his creditors. It is no longer open to dispute that this is in substance the position which financial America has occupied during 1902. It is because of such a state of affairs that harvest-time itself was selected by destiny for the outbreak of dis-

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turbance and disorder in the American money market. But the matter needs to be reviewed in plainer terms.

The trouble with our financial situation of last autumn has been variously defined. The Comptroller of the Currency, in a very striking speech, has explained that the banks were not maintaining their usual ratio of reserve to liabilities. The one had actually decreased during the last three or four years, while the other had expanded portentously. But this might be effect, not cause. After the shock to the markets in November, the London "Times," a keen and not over-friendly critic of our financial situation, pointed out, in an exhaustive review of the American situation, that the United States had "locked up too great a proportion of its capital in temporarily unrealizable securities," and that our huge new corporations, having been "capitalized on the basis of the high rate of profits reached in the United States in 1900 and 1901," might "prove to be overloaded with nominal capital when the reduction in profits . . . becomes more pronounced." It will hardly be denied that there is some truth in both allegations. In this article, however, we have to consider the visible phenomena of the period which will point to the truth of the situation.

That the processes involving conversion of floating into fixed capital have gone too fast for the country's immediate resources, there are good grounds for believing. What has been made very evident since the autumn season opened, though much obscured a very few months ago, is our anomalous position on the loan markets of the world. Earlier in the year this position was disguised for several reasons, one of which was the prevalent belief that much of our foreign borrowings had been paid off, and that what was left, being subject to willing renewal by the lenders, was unlikely to trouble the autumn money markets. It must be said that the markets had not lacked fair warning. The experiment of arranging our corporation "deals" on the basis of finance bills placed on Europe's markets had been tried in 1901, and with no agreeable results. The capital thus advanced by France and England was recalled when the loans matured in the early autumn; and demand for remittances with which the payments due at London and Paris could be made was such that the drafts on Europe, created by our grain and cotton exports, could not counterbalance it. To settle the account, our markets had to ship to Europe, in the last three months of 1901, upward of $20,000,000 gold; and they had to do it not only at a time when American bank reserves could not conveniently spare the gold, but when,

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under normal circumstances, equally large amounts of gold ought to have been in motion from Europe to America. On the markets, the effect was most disturbing.

It was, however, argued with some force last summer that the corn crop failure of the previous year was a factor, in that season's problems, whose influence was paramount. With an abundant harvest this past summer, it was reasoned, the experience ought not to be repeated. As to the influence of the corn crop on the two autumn seasons, I shall have more to say a little further on. But even granting a greatly altered situation in that regard in 1902, there have remained two influences which, it may now be seen, were greatly underrated in the forecasts of last summer. First, it is not clear, judged by the subsequent movement of events, that what may be called our floating debt to Europe had been reduced at all in 1902 from that of 1901. It had been shifted: that is to say, large sums in American obligations, placed at first in London, had been endorsed over to Paris bankers. But this was not the whole story. Whenever the New York money market showed signs of unwillingness to advance further credits to promoters and speculators, or to renew those previously granted — as was frequently the case while the ratio of bank reserves to liabilities was declining — efforts were made at once to raise the requisite capital in Europe.

Such efforts appear to have been entirely successful; one important reason for this being the widespread stagnation on the foreign financial and industrial markets. With a narrow field at home for placing capital advantageously, with European enterprise under a cloud, and with discount rates at the principal foreign markets ruling continuously two per cent or more below the New York level, the inducement for the foreign lender will be recognized. It has been recently alleged, on the authority of the usually well-informed "Frankfurter Zeitung," that during the last season American bankers have been borrowers, not only on the London and Paris money markets, but from the Dutch, Belgian and German cities generally, and from Vienna. I have hitherto noticed the recourse employed by large speculative holders of securities when the New York market showed reluctance to continue the necessary loans. The stocks were promptly shipped to London, and the needed money was raised in Lombard Street. By such expedients the liabilities of the New York banks were proportionately reduced, and such relief undoubtedly played its part in the financial reassurance of midsummer. But the foreign debt, already larger than the home market at the time imagined, was proportionately increased. It was increased, furthermore,

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in a somewhat precarious way; because, in the case of money raised for stock speculation, the renewal of the ninety-day foreign loans depended, naturally, on maintenance of prices for the pledged securities. If prices were to fall, the foreign capital was likely to be called home.

At the start, there was nothing in such operations to create a drain by foreign markets on our own. On the contrary, all these expedients were measures of relief; and the only disturbing question was whether the foreign loans would or would not be called in at maturity. The result has been that they have been recalled, and this partly for technical reasons connected with international exchange, partly because foreign lenders had other uses for their money, and partly, perhaps, because of some misgiving about the American situation. A great part of these loans from Europe came to maturity during September and October. To pay them off, it was necessary for the American borrower to do two things: to raise an equivalent sum from domestic institutions; and to buy exchange on London or the Continent sufficient to liquidate the European debt. The first process resulted necessarily in a large increase of American bank loans and liabilities; the second caused so continuous a demand on the market for exchange that sales of drafts on London, against our autumn exports of grain and cotton, failed to reduce the rate; and it rose to the neighborhood of the gold export point in a season when rates ought normally to have been so low as to draw Europe's gold.

The usual course of events, in our domestic money market of the autumn, is as follows: The harvest districts need large amounts of currency, when the crops are gathered, to pay the harvest-workers. At other times they need only a fraction of this sum. After the harvest, therefore, the farmer who has marketed his produce, the worker who has saved his wages, and the storekeeper who has sold goods to either, deposit their money in the local bank. This country bank, which is allowed by law to deposit a fixed part of its required cash reserve with city institutions, sends its currency East, where the banks pay two per cent for the use of it. The Eastern bank is then able, on the basis of these new reserves, to increase its loans and liabilities. It makes a good part of the new loans in Wall Street, and such credits are largely employed on the Stock Exchange.

The point to observe, however, is that the money sent East by the "country banks," under such conditions, is their own money, and is the money which must be used again when the next harvest-time arrives. As a rule, interior banks begin to call back their Eastern deposits at the

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end of August. They keep on withdrawing them, ordinarily, until the end of October, when harvest is over and harvest-hands have been paid off, after which, in a normal year, the return movement to the East begins. These dates should be particularly marked, in considering the last season's events. The amount of cash which flows from Eastern to Western and Southern bank reserves, during this two-month period, runs up to $50,000,000 or more. This is a large amount for the Eastern banks to part with. What the city banks do first, in preparing for the movement, is to reduce their loans, in order to keep up the ratio of cash reserves to liabilities. Such loan contraction raises the New York money rate. Attracted by that advance, capital is transferred from Europe to America for use on our money markets. Sale of the drafts on Europe, created by such transfer, depresses the market for exchange; and such sales will usually coincide with the most active season in the American export trade. Eventually — during October and November, as a rule — this pressure for remittances from Europe becomes so great, and exchange rates sink so low, that Europe has to settle its balance by gold shipments to New York. In these two autumn months of 1900, the gold shipped to us from Europe amounted to $8,400,000; in 1899, to $3,000,000; in 1898, to $9,600,000; in 1897, to $7,800,000; and in 1896, to $25,800,000. The movement, under normal conditions, occurs with the precision of a finely adjusted mechanism. It is only when the currency, no longer needed by the farming districts, flows back to New York, that New York in turn sends gold to Europe.

This brief description of a normal movement will show what it was that interfered with the usual automatic relief last autumn, and how such interference happened. I have already shown that the return of borrowed capital to Europe, during the recent autumn, more than offset the depressing influence of our export trade on international exchange. Taken alone, it would probably have served merely to bring the exchange market to a balance. But it happened, also, that our merchandise import trade was increasing rapidly. Remittances by importers, to pay for their foreign purchases, added to the demand for transfer of capital to London. On the top of this came heavy sales of American securities by Europe — largely a consequence, no doubt, of the precarious operations by which New York operators for the rise had shifted their load of borrowed capital to London.

The upshot of this combined movement, occurring, as it did, at a time when practically no corn was left over from 1901 to be sent

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abroad, and when exceptionally high prices for many other products had checked European buying, was to turn the balance of exchange against us when it should have been heavily in our favor. Our bank reserves, therefore, got no gold from Europe, at the hour when a rather unusually active drain of currency to the interior was in progress. Not only did we receive no gold from Europe, but, as the autumn advanced, and more and more of the three hundred millions or thereabouts in loans from the foreigners matured, demand for remittances of capital grew so urgent, on the Wall Street market for exchange, that rates slowly advanced to the gold-export point. That we shipped no gold to Europe, during October and November, was wholly due to the fact that more foreign capital was used as a basis for drafts on England, which could be used instead of exported gold. Such operations were mere postponement.

But this was not all. The loss of bank reserves, with such lack of the usual compensation, would lead ordinarily to a more rigid curtailment of loans than ordinary. But I have shown that the very process which was blockading remittances of foreign gold — the recall of European capital from our borrowers — was also necessitating increase of bank loans and liabilities at home. When a syndicate pays off its loan at London or Paris, it must borrow the money in New York to do it. While this class of borrowing was in progress, new loans were also being raised at New York for two other purposes. Three or four large corporation "deals," including the famous purchase of four English steamship companies by the Shipping Trust, could not be put through without heavy borrowing from the banks; and the loans were made accordingly. At the same time a dozen powerful groups of speculators, holding with borrowed money large quantities of securities which they hoped to make the public buy, were resisting any attempt of the banks to reduce their facilities, and in more cases than one were demanding more. Early in September, the New York banks pursued the policy of cutting down loans and liabilities, in spite of these new demands; they reduced them no less than $36,000,000 during September. But the Western banks had meantime entered the New York market on their own account. Even while recalling cash, they increased their Eastern loans. They lent to all sorts of borrowers at profitable rates; so it happened, when the severe November strain occurred, that a single group of Stock Exchange speculators owed to these Western banks a sum reckoned at upward of $50,000,000. In other words, the real liability account had been actually increased.

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The reader should now be in a position to understand what happened afterward. The banks struggled hard between the wish to repair their falling reserve percentages and the wish to oblige their profitable customers. The Treasury was first appealed to. Early in the autumn, the Government had taken a moderate sum of cash from the markets through its surplus revenue. It resorted to some rather vigorous measures to restore this money, and managed to do so. It went further, and, as I shall show, threw back into the market much more than it had withdrawn, until its own reserves were nearly down to the ordinary working balance. But the forces at work against the bank position were so powerful that even this relief was merely temporary. On September 20, the New York clearing-house banks as a whole, in spite of their effort at loan contraction, fell below the twenty-five per cent ratio of reserves prescribed by the national bank law. The burden of liabilities continued to accumulate. Finally, early in October, the New York banks took concerted action to force further and heavy reduction of loans by purely speculative borrowers.

It had, in fact, become merely a question between compelling some liquidation of these loans and refusing proper accommodation to mercantile borrowers. For a time the speculators still held their position by borrowing from the inland banks; and the extraordinary spectacle was witnessed of two huge "deals" put through, with the help of heavily increased New York loans, in the very hour of distress. Not only this, but the beneficiaries of the larger of these "deals," suddenly receiving a great block of capital in payment, rushed into the stock market, filled the newspapers with wild predictions of a thirty or forty-point further advance in prices, and proceeded to start an excited upward movement. This mad performance lasted as brief a time as might have been expected. The Western banks themselves took alarm at the fall in their own reserves and called in their New York loans. In the second week of November, the stock market broke with exceptional violence. The so-called "pools" of speculators threw their stocks on the market in quantities such as had hardly changed hands since the same operators started their "boom" last spring and in 1901. Prices fell almost exactly as far as the belated stockjobbers of October had predicted that they would rise; declines of thirty and forty points being familiar spectacles throughout the list. With this liquidation loans were enormously contracted and liabilities reduced. Thus, for the time at all events, the banks obtained the imperative relief. But, as usual, the pulling-down of a fabric of speculative credit has not occurred without

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some shaking of the financial structure generally; nor, for some reasons peculiar to this season, was it clear how far the money situation had been restored to normal.

So much for the general movement of finance in the last three or four months. It will now be necessary to review in greater detail the various influences which combined to create these notable phenomena. Roughly divided, there are seven groups of events which have severally played their parts. Our foreign trade during the period; the Treasury's operations; the movement of American industry; the course of prices on the Stock Exchange and in the commercial markets; the progress of corporation "deals," on the one hand, and of concerted labor demonstrations, on the other, and the state of the foreign markets — these may be described as the governing influences. The action of the money markets, which must occupy a conspicuous place in the discussion, was effect rather than cause; and the harvest developments were so far foreshadowed before this three-months period began that they cannot be described as new.

Foreign trade is popularly classed as one of the duller topics of discussion. Yet no topic in the range of human interest is more full of significance as to the actual movement of civilization. The so-called "American invasion" of the outside commercial world has been one of the dramatic events of the generation. The most languid mind could hardly fail to be thrilled by the news that our country, long a commercial tributary of Europe, had suddenly, in the narrow space of three or four years, stepped forward into the place of an arbiter of Europe's commercial destinies. Something of wonder and something of excitement was provoked by the news of American manufacturers competing with English makers at Manchester, with Germans in Westphalia, with Frenchmen in Paris, and with all of them in the neutral ground of Canada, Australia, China, India, South America, Russia, Persia, and the Transvaal. To intensify this interest, the "American invasion" became a watchword in European politics. Austria's finance minister called on Europe to combine for organized resistance; our manufacturers were denounced in the French Assembly; the British Parliament deliberated on the means of protecting Britain's ocean trade from falling into our hands. The immense accumulations of American capital on the foreign markets further incited the imagination. The country which had to place in Europe, as lately as 1895, the bulk of its own national loans, took up, in 1901 and 1902, great blocks of British consols and Imperial German

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funds. All this was primarily, though not exclusively, an outgrowth of our foreign trade conditions.

There is no doubt whatever that, within the two last years, these conditions have radically changed. They have changed, as they usually do, after an abnormally sudden movement of the kind. During the four-year period from 1896 to 1900, the increase of our annual export trade was $472,000,000. Of this, $239,700,000 was in agricultural products, made possible by the enormous increase in our harvests and by harvest deficiency abroad. But $232,000,000 of the period's increase, or an almost exactly equal sum, was in non-agricultural commodities; and of this $187,800,000 was in manufactures. This last-named element of expansion was, of course, in part a result of the outstripping by foreign demand of foreign capacity for production; but it resulted more largely from the relatively low range of American prices. What has happened, since the movement culminated, is exactly this: Our own harvests have been less abundant, through the accident of nature; foreign harvests have increased. Foreign demand for manufactured goods has immensely decreased through the collapse of Europe's "boom"; and simultaneously American prices — partly as a result of increasing home demand — have risen far beyond parity with the foreign markets. In other words, every one of the influences noticed above as causes of our trade supremacy has either been modified or extinguished. The consequence has been quite inevitable, and it has been rapidly unfolding in the last three months. It may be seen in the following figures for the nine months ending September 30 in a series of years:

EXPORTS FOR NINE MONTHS.

	Agricultural.	Manufactures.	Total.
1895	$355,977,906	$145,793,834	$546,424,359
1896	416,364,411	184,792,443	650,956,354
1897	466,635,349	212,478,810	732,630,004
1898	571,280,301	227,822,045	854,188,848
1899	542,114,469	277,502,649	885,294,389
1900	594,125,553	338,678,243	1,012,747,024
1901	649,352,577	298,660,551	1,024,782,255
1902	536,273,620	311,302,441	922,708,223

Nor, for obvious reasons, has the change been less conspicuous in the import trade, the returns of which I shall classify according to the Treasury's subdivision:

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IMPORTS FOR NINE MONTHS.

	Food.	Manufactures.	Raw Materials.	Luxuries.	Total.
1895	$174,856,625	$193,103,098	$160,603,316	$72,480,100	$601,043,139
1896	180,471,561	159,749,219	121,254,219	60,618,578	522,093,577
1897	175,102,960	158,098,119	191,492,898	64,049,338	588,743,315
1898	140,775,414	124,073,401	148,933,456	61,596,684	475,328,955
1899	178,630,444	149,876,488	190,252,298	77,174,899	585,934,129
1900	159,629,158	164,952,255	217,619,372	82,266,648	624,467,433
1901	165,655,789	163,915,862	221,468,272	95,437,646	646,477,569
1902	154,336,010	192,431,198	255,754,362	99,634,105	702,155,675

That this movement has been proceeding at an accelerated pace during the last few months may be judged from the following comparisons:

EXPORT TRADE.

	1902.	1901.	1900.	1899.
August	$94,942,310	$108,024,209	$103,575,965	$104,646,020
September	121,220,378	106,989,926	115,901,722	109,886,677
October	143,179,752	145,659,415	163,389,680	125,966,527

IMPORT TRADE.

	1902.	1901.	1900.	1899.
August	$78,923,281	$73,127,217	$61,820,488	$66,643,810
September	87,738,122	66,826,813	59,568,600	70,711,965
October	87,487,527	81,446,763	70,631,034	72,232,238

In October, for example, the excess of merchandise exports over imports amounted to $55,692,225, as against $64,212,652 in October, 1901, and $92,758,646 in October, 1900. The monthly trade balance in our favor was still large, but it was barely half as large as it had been two years before.

The influence of this movement of trade on the allied movement of international credits is easy to discover. The connection of both with the high prices prevalent in this country I shall discuss later on; but for the present our discussion leads us to the immediate bearing of this trade situation on banking capital. Let it be observed that bank capital was already employed very freely in the immense consolidations of various kinds which had been planned, and in the mercantile industries which reached last summer a stage of unprecedented activity. I

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have remarked in previous reviews of the year's markets that the surplus reserves of the New York banks particularly, and of the national bank system in general, have for twelve months been abnormally low. During a large part of the year, it could be said that the New York bank surplus was smaller than at any corresponding date in a dozen years. On a reserve thus abundantly employed, and with so small a surplus, came the demands for interior currency. I have already explained the reason why this so-called harvest money must go out in the form of actual cash. There was good reason to believe that demands for such purpose in 1902 would be exceptionally large. The crops as a whole, including the corn crop, were the largest and perhaps the most valuable in our history; and it was therefore perfectly natural that the amount of money required to move them should be larger. But this was not all. The previous year's corn crop failure induced the farmers to sell the cattle whose winter feed would be too expensive. In 1902 they had to replace what they had sold; and they accordingly bought, from other sections of the country, large numbers of cattle, to purchase which they had to raise money from their banks. Some of them had engaged in large purchases of land for new acreage and pasture; and for this, too, money was borrowed. Instead, therefore, of having their home depositors repay their loans in the later autumn months, the Western banks had to lend more money in the West. This was a very unusual movement. It explains, first, some facts regarding interior bank reserves of which I shall speak again; and, second, the failure of interior money to return to Eastern banks. During September and October, large sums of currency went from the East to the interior. This had been expected. But instead of the return movement commonly witnessed in November, upward of $5,000,000 more was sent in that month to the interior. That movement continued in the same direction during December.

The real pinch for money was felt in the East at the opening of September. Under the drain to the interior, unrelieved by gold imports, surplus reserves of the New York banks, which ended August at the figure of $9,700,000, fell on September 13 to $715,000, and on September 20 reported a deficiency of $1,642,000, this being the first deficit since 1899. It so happened that at this same time the Comptroller of the Currency was gathering his figures for the returns of national banks. The returns of the inland institutions were exceedingly unfavorable, as compared with the same date of the year before. Deposits of all national banks in the United States had increased upward of $200,000,000, while specie and legal tender had decreased $32,000,000.

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There was shown a decline of nearly two per cent in the ratio of reserve liability among all the country's national banks. The subjoined table, which reckons percentage of reserve on the most favorable basis of computation, shows how rapidly this movement had been going forward. It should be added that, if reserves were calculated on the strict basis of reserve cash retained on hand, a large proportion of the interior banks would be below the legal minimum:

PERCENTAGE NATIONAL BANK RESERVES, SEPTEMBER.

	1902—Per cent.	1901—Per cent.	1900—Per cent.
New York	24.70	26.77	27.94
Chicago	21.89	26.12	27.35
St. Louis	24.15	19.83	22.39
Other reserve cities	27.64	29.36	31.93
New England	25.81	25.52	28.04
Eastern	22.32	24.01	28.72
Southern	24.72	24.69	26.35
Middle Western	25.90	29.50	31.98
Other Western	32.69	38.57	39.77
Pacific	32.44	32.38	36.10
All country banks	25.56	27.56	30.44
Total United States	25.74	27.65	29.67

Up to the close of September, the Treasury Department had continued its policy of the preceding six months; that is to say, it had taken no measures, such as bond redemption, for actual release of the public surplus. Its reason for this — the influence of bond-buying in contracting the national bank-note currency — was recognized and approved by conservative financiers. In Wall Street, high officers of the Treasury were quoted as answering all appeals for help by the statement that speculation was at the root of the condition of the money market, and that speculation ought, therefore, to bear the consequences. This view of the matter was in the main correct, and it was generally accepted that last autumn the market would have to get out of its scrape without help from the Treasury. In extending public deposits with the banks, Secretary Shaw gave every opportunity; and the amount of money, paid to the Government, but left by it on deposit, nearly equalled the excess of revenue over expenditure. A few weeks later it was much more than equal.

The markets had, therefore, pretty much made up their minds that the Treasury could not help them, and had paid no attention to various rumors of a radical change in the Department's policy. It was with

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a decided shock of surprise that the financial community read, in the morning papers of September 29, official announcement of two wholly unexpected steps by the Treasury authorities. The banks and the Treasury Department had been in the habit of reckoning among the liabilities against which a twenty-five per cent cash reserve had been required, the Government's deposits with the banks. It was now announced that on these liabilities, reserves would no longer be required. It had also been the rule, since public deposits with the banks began, that such deposits should be secured by a pledge of government bonds with the Treasury. The Secretary's second announcement of September 29 was that a certain proportion of this pledged security might be withdrawn and replaced by other bonds of States and cities, approved by the Department. With regard to this second change of rule, however, it was provided that the government bonds withdrawn should be used as a basis for new bank circulation.

These two radical moves were greeted with varying sentiments by the financial community. Even on the Stock Exchange they were accepted with misgiving. Approved by bank authorities in some instances, they were regarded by all as a questionable stretch of authority. In the very week of their announcement, the New York Clearing-house committee, representing that city's associated banks, tacitly repudiated the plan of dispensing with cash reserves against public deposits. The committee announced that, in their weekly statement of resources and liabilities, the "surplus reserve" would be reckoned after deducting, as usual, the twenty-five per cent of cash retained against government deposits.

I believe it is fair to say that the community has now agreed in pronouncing both these steps of the Treasury Department to have been mistakes. They are so regarded both in the light of legality and of expediency. That either move was unsafe or improper, from the broader view of finance, no one contends. Public deposits secured by sufficient pledge of high-grade collateral do not require a twenty-five per cent reserve to ensure their safety. Nor, speaking generally, is a collateral of "gilt-edged" public bonds of States and municipalities less sound than collateral of government securities. Unfortunately, these considerations were beside the question.

The law is reasonably plain in both regards. In the matter of cash reserves, the national bank law originally made the following provision:

> Every national banking association in either of the following cities [naming the sixteen "reserve cities"] shall at all times have on hand, in lawful money of the

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United States, an amount equal to at least twenty-five per centum of the aggregate amount of its notes in circulation and its deposits, and every other association shall at all times have on hand, in lawful money of the United States, an amount equal to at least fifteen per centum of the aggregate amount of its notes in circulation and its deposits.

The penalty for violation, discretionary with the Comptroller, is, first, a warning to the delinquent bank; then, after thirty days, the winding-up of its business. In June, 1874, this requirement was revoked as regards the national bank notes; but it was never revoked as regards public deposits. It was suspended by Secretary Sherman in the refunding operations; his reason being that the deposit of public moneys, made during the ninety-day period between sale of the new bonds and redemption of the old, was so large that accumulation of a twenty-five per cent cash reserve would have deranged the markets. Mr. Sherman's suspension of the rule was irregular; but it had as its excuse an abnormally great and wholly temporary expansion of deposits. This excuse was entirely lacking last autumn.

The substitution of other collateral than government bonds for security against these deposits was based ostensibly on a proviso of the laws regarding public moneys, to the effect that national banks "shall be depositories of public moneys except receipts from customs, under such regulations as may be prescribed by the Secretary." This sounds convincing; but, unfortunately for the Department's contention, it is immediately qualified by the following distinct stipulation:

The Secretary of the Treasury shall require the associations thus designated [as depositories of public money] to give satisfactory security, by the deposit of United States bonds and otherwise, for the safekeeping and prompt payment of the public money deposited with them.

The qualifying phrase, let it be observed, reads "and otherwise," not "or otherwise." When the law was passed, its author was asked in Congress what he meant by "and otherwise." He replied:

By the present arrangement or rules of the Department, the Secretary requires a personal bond in addition to the deposit of United States stock, and it was to cover that point that I offered the amendment.

That is to say, a depository bank may be required to give *more security* than the government bonds required, but it must at least give that. There is nothing explicitly to authorize the Treasury in substituting other collateral.

Technicalities of this law are sometimes overstepped in the face of grave emergencies. In such cases, action can be justified only by the

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event. It must be proved that the step was necessary, and that it was effective. In the case we are now considering, it has turned out to have been neither the one nor the other. The market's only means of escape from its dilemma was increase of cash reserves or decrease of liabilities. The Treasury's two dispensations provided neither recourse. Removal of reserve requirements from existing public deposits merely gave to national banks the power of increasing liabilities, without being notified by the Comptroller that their reserve percentage was below the legal minimum. As a matter of fact, its single tangible result was to give opportunity for renewal of reckless speculation on the New York Stock Exchange. Permission to substitute other collateral for the government bond security had no real effect whatever. It merely served to increase to a moderate extent the bank note circulation, which rose in October and November some $20,000,000. The trouble of the hour, however, was not lack of a circulating medium, but lack of bank reserves in due proportion to liabilities. The notes, of course, could not be utilized for reserves.

I believe, in short, that these two expedients had not the slightest effect on the situation. The Treasury did relieve the strain on money at a later date, but only through resuming bond-purchases and redeeming $15,500,000 bonds. Almost wholly as a result of these purchases, which were made a fortnight after the two moves regarding reserve percentages, the New York banks added $25,000,000 to their cash on hand — chiefly proceeds of the sale of four per cents by a New York bankers' syndicate to the Treasury, at a price bringing $21,300,000.

This last move was proper and effective. It was effective, because it did increase available cash in bank. It was proper, because only $2,500,000 of these four per cents were held as security for bank notes; because the price at which they were offered was below the open market; and because, under the law, the Treasury had in any case to redeem some $55,000,000 bonds for the sinking fund during the fiscal year, none having yet been purchased. With this episode, which ended early in November, we may leave the Treasury's intervention in the markets. It has apparently no more cards left to play. The balance of cash in all the Treasury offices, in a form available for use in its daily payments, was $77,000,000 at the close of August; but at the end of November it had fallen to $38,000,000. This is about as low as the Department cares to let its surplus fall. It is worth while to pause a moment, however, and see how the Treasury has really stood, this last season, in its account with the money market. I give, in the sub-

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joined table, the actual cash holdings of the Treasury at various dates — exclusive of the $150,000,000 reserve against legal tenders — and the amount of its bank deposits:

PUBLIC SURPLUS.

	Held by the Treasury.	Held by the Banks.
December 1, 1900	$124,503,533	$95,429,054
December 1, 1901	139,987,372	112,896,878
July 1, 1902	163,734,103	126,506,517
August 1, 1902	160,361,518	126,152,991
September 1, 1902	168,785,421	125,382,169
October 1, 1902	175,598,261	133,932,197
November 1, 1902	145,494,171	146,885,012
December 1, 1902	142,652,246	148,666,403

In the four months after the fiscal year began, on July 1, the surplus revenue of the Government was $27,361,070; wholly because of the enormous customs revenue. Yet, as the above tables show, not only has the Treasury withdrawn no money from the market in this period, but its actual cash holdings have been reduced by $21,000,000.

It is important to keep this fact in mind, because the idea is still very generally entertained that the Government's operations are responsible for the trouble. At New York this is partly true, since the law, which was passed in times of fiat money, still requires that customs taxes be paid in coin or its equivalent, and does not allow their deposit in a bank. That law ought to be repealed; but its existence does not alter the fact that the Treasury, with the means at its disposal, has done all it can. As to provision for the future, that is another matter. Whether the Treasury did or did not cause the trouble in last October's money market, there is continual danger that it may cause such trouble. The only way of guarding against such a possibility is to arrange for depositing all the public surplus — except the $150,000,000 gold reserve and possibly a moderate "working balance" — with the banks. To do this, the requirement of deposit of government bond collateral must be changed. On this point more may be said at a later date; the Secretary of the Treasury in his annual report, and the New York Chamber of Commerce in its resolutions of December 4, have both recommended reform of existing methods.

As might naturally have been expected, movements to form new corporate amalgamations, involving large demands for capital, have been

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arrested by the state of the money market. There have, however, been some large demands for undertakings planned before the strain on the banks began. One such demand was connected with payment for the controlling interest in Louisville and Nashville Railway stock, seized by a ring of speculators, sold at high prices to a prominent banking house, and paid for by capital raised by another Southern company. A second and, on the whole, more exacting drain — because the capital had to be exported — came from the closing, on December 1, of the Shipping Trust's "deal" to acquire the transoceanic steamers. This payment was very skilfully managed by the contracting bankers; but the requisite purchases of remittances to London had much to do with the high rate of foreign exchange in the later autumn. The Steel Corporation's plan to float $50,000,000 bonds, and incidentally to convert $200,000,000 preferred stock into bonds, has not been carried out. Late in September, the New Jersey Appellate Court of Errors dismissed Judge Emery's injunction against the plan. Chancellor Emery had ruled that the $200,000,000 operation was "not a purchase of his (the shareholder's) stock for retirement or for any other purpose," but was the conferring of a conversion privilege, illegal as applied. Judge Van Syckel, in his opinion overruling Chancellor Emery, held that, theoretically, the $200,000,000 new bonds were sold and the proceeds applied to the purchase of $200,000,000 shares, and this the Court declared to be legal. The pendency, however, of another injunction suit, based on somewhat different principles, and the troubled state of the money market, have deferred the whole undertaking.

While the forced readjustment of prices in the stock markets was going on, general trade throughout the country was progressing in a really encouraging manner. Business activity, in fact, was an important influence in the tightness of the autumn money market. During the month of October, clearing-house exchanges for all commercial points in the United States increased nineteen and one-quarter per cent over 1901. The importance of this comparison may be judged from the fact that aggregate clearings for the ten months ending with October were slightly less than those of the year before. But the truth is that all signs pointed to a season of trade activity unsurpassed for its vigor in the country's history. The railway annual reports, which have been published in the last few months, are perhaps the best witness to the immense purchasing power of the country. These annual returns, in fact, have answered the question why railway earnings continued to increase in 1902, notwithstanding the falling of the previous year's corn crop a billion

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bushels below the normal. Hasty reasoners had explained the anomaly on the ground that corn is not a great railway-revenue producer; that, in the railway language, "wheat rides while corn walks"; in other words, that a corn crop is distributed near home, whereas wheat moves to the seaboard. This was not the true explanation. The annual reports have shown that, in almost every case, freight carried from the farms to the cities has decreased so largely that railway earnings from that source were heavily reduced. But, in the meantime, merchandise carried from city markets to the interior — notably freight scheduled as "manufactures" — has risen to such proportions as more than to counterbalance the loss in agricultural commodities.

These enormous purchases by the rich interior had to do alike with the strain on bank resources and with the merchandise import trade; but they were none the less signs of great prosperity. Other familiar indices have not been wanting. The iron market, still an index to the trade movement of the country, showed little sign of wavering. Production of pig iron reported on December 1 was the largest ever recorded, with the exception of that shown by the returns of October, July, June, and May of 1902. It was greater by 18,000 tons a week than in November, 1901. In the finished lines of steel and iron, production made even more favorable comparisons. Toward the end of October, there was a more or less severe cut in prices of a number of finished steel products. It has been, however, the unanimous judgment of the trade that these reductions in no respect indicated decrease in demand by American consumers, but resulted rather from the fact that production had grown so rapidly as to outstrip demand. It is from that direction that further price reactions are undoubtedly to come. But that is a problem of 1903.

Nor has anything occurred to cause discouragement in regard to the harvests, beyond the fact that speculators on the Chicago Board of Trade undertook to do with wheat and corn what Wall Street speculators did two months before in stocks. By putting up the price they necessarily kept down exports, thus postponing the natural relief which should come from increasing export trade. In addition, a somewhat curious influence was at work in the tendency of farmers to hold back their own corn, largely for feeding purposes, with the consequence not only of lessening the supply in the market's hands, but of keeping in the West currency which usually moves back to the East with the beginning of November. The result of this double influence — slow shipments to

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market, and high prices — was that corn, even at the end of November, was contributing to the export trade less than a million dollars monthly, as against the $9,000,000 sent out in this same cereal during November, 1900. Similarly, wheat exports were curtailed, and were reduced in November some two million bushels below 1901. This has resulted unquestionably from the high Chicago price of wheat. That price has been less than the price of a year ago; but what the speculators overlooked is the fact that Europe's crops have been substantially larger than in 1901, notably those of Germany and Russia. With home producers better able to fill the home demand, foreign consumers naturally refused to pay as much as before to our exporters. Toward the opening of December, this very untimely forestalling movement ceased; the result being an instantaneous increase of exports, both of corn and wheat. Corn in particular is now moving out in greater volume than at any period since the middle of 1901.

Little need be said regarding the foreign markets, except that there has been no sign of revival there. Depression has been the single characteristic alike in London, Paris, and Berlin. Consols in particular have nearly touched their low record of the previous year, and have fallen well below the price at which the April issue was taken by the American syndicate. Whether this apparent stagnation is favorable to our markets or not is a question of some interest. In the same connection, it may be mentioned that silver fell again during November to a new low record in the history of the world — a movement ascribed chiefly to the demand for gold in payment of China's indemnity to the European nations. This requirement made it necessary for the Chinese Government to collect its silver coins, sell them for bullion, and buy exchange on London with the proceeds. It is possible that this latest decline in silver may have some notable results with countries still living under a silver standard.

I have left to the last a word about the labor situation, of which brief notice should be made, because it is almost certainly the problem of the future. The coal strike, as is well known, reached a compromised settlement in October through the President's appointment of an outside commission to pass judgment on the miners' grievances. Whatever may be the right or wrong of this controversy, and of other labor controversies which have followed it, the fact remains beyond dispute that even a partial victory gained by the strikers in the coal fields has resulted in causing restlessness and aggressive movement by labor

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throughout the country. It may, indeed, be said that this movement has been general to the world; for the strike of French miners which happened at the time of our anthracite disturbance was followed quickly by similar disturbances in Cuba and even in the Argentine Republic.

This movement of labor is a sign of the times of profound significance. Superficially, it is discussed and dismissed as a demonstration by the worker to gain his share in the larger profits of the period's industry. From a broader point of view, it is accounted for as the demand of the worker for a rate of wages sufficient to meet the higher cost of living. Let it be noticed that no doubt is raised either that the profits of industry have increased or that the price of the necessaries of life is higher. Were these the only questions involved in the existing problem, no valid objection could be raised to very large demands by labor. Even if it were assumed, in accordance with the theories of one economic school, that increased money supplies for the world at large have permanently raised the level of commercial prices, it would still have to be conceded, in all justice, that labor must have its share.

But the questions of the future are, Will the rise of prices and the expansion of profits last? If not, what form will the labor problem then assume? Were wages adjusted in a determined ratio either to corporate profits or to cost of living, the problem would be simple. But it is very well known, from experience of the past, that when prices and profits fall in a subsequent general reaction, labor does not assent to proportionate reduction of its wages. If, however, at some subsequent period, prices fall while the factor of labor cost remains unchanged, the problem of profit will become formidable.

This was, in fact, the besetting problem from 1884 to 1889, and from 1893 to 1895 — the periods of our greatest strikes. For the present, the matter is adjusted by the nearest recourse. Wages are raised when labor is able to make its demand effective, and prices are raised to cover the increased cost of labor. This has just happened with the railways. Some very disquieting signs of restlessness had been displayed among railway employees. With the lines literally choked with traffic, the chances of actual strikes were too serious to be lightly contemplated. The railways moved in concert. Some of the Western companies had already made a fresh advance. In the third week of November, virtually all the important Eastern and Middle State companies granted a sweeping ten per cent increase in wages of the less highly paid employees.

This move was accompanied by a highly significant statement by the president of the Wabash Railroad, who, in granting the increased

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pay, pointed out in a letter to his wage-earners that, since 1897, his company's annual bill for labor had already increased fifty per cent, for fuel 170, and for materials and supplies 237, while the average charge for transportation had not increased at all. Within a week, the same railways had announced a ten per cent increase in their freight rates, wherever feasible; defending the move not only by the necessity of meeting the higher cost of labor, but by appeal to the right of the companies to share in the general rise of prices. The significance of this move is manifest. The higher railway rates, if made effective, will be made so because existing demand for transportation runs beyond supply.

But what situation will arise when supply once more exceeds demand, and labor resists reduction in its pay? This is a question of the distant future. For the present, the higher pay of wage-earners means their ability to buy more freely; hence, an increased demand for necessities and luxuries, and a tendency to sustain high prices.

As to the broader question, how far this demonstration by the laborers is an inevitable result of the rise in the cost of living, that is a question which may be left to the political economists. The practical problem of American industry is this: If the cost of materials is to continue as at present or be increased, will not consumption ultimately flag? And if, in consequence of such decreased demand, prices decline in one or another market, will it be possible to lower the heavy labor cost?

With so confused and complex a financial situation, forecast of the future becomes more than usually difficult. A few unquestionable facts, however, have been established and will serve to guide the judgment. The country's actual wealth, to begin with, is greater than it was a year ago, and, presumably, its real consuming power is greater. The United States is prosperous in an exceptional degree, and is likely to remain so. Within a very short time its export trade ought to rise to proportions not attained in at least two years, and with this expansion in cereal exports — a result of abundant crops — our highly unpleasant position on the market for international exchange ought to be rectified. All these are agreeable omens.

On the other hand, four other facts stand out in sharp relief. The exploitation of industry by American capital has, for the time at least, been greatly overdone. The banks have had to be publicly warned, by the highest officers in the Government's financial administration, that they were going too fast in extending facilities of credit. Existence of very substantial blocks of new securities, as yet unsold by their underwriters, has been proved by various incidents on the market. Finally,

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the returns of foreign trade have shown that, to some extent at least, our high level of prices has put our markets out of joint with markets of the outside world, and has impeded the normal action of international exchange.

A glance at these four unfavorable points in the situation will show that they may be corrected by all but automatic processes. The proposed change of the basis of bank note issues from government bonds to the assets of the banks would undoubtedly remove some troublesome factors in the situation. It would hardly remove, however, the factors just recited. Excessive demands on capital; too rapid increase in extension of credit facilities to other quarters than normal trade; too large a reliance on the immediate absorbing power of American investors; and too stubborn a maintenance of high prices for commodities, when prices in the outside world have been lowered — these obstacles to financial equilibrium, if they really exist, must be removed by other agencies than legislation. They have already been removed, in part, by the action of the markets. ALEXANDER D. NOYES.

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APPLIED SCIENCE.

If the question were asked as to the characteristic feature of the modern applied science of engineering, the reply would undoubtedly be: "The wholesale manner in which work is carried on." It is not so very long ago that everything, except the smallest articles and those required in great quantity, was made singly, or at least in small lots; and even when standardizing and interchangeability were introduced, these methods were by no means used in a way which showed a realization of their possibilities. The present tendency, on the contrary, is toward the elimination altogether of things which cannot be made wholesale; and methods which formerly applied only to firearms, sewing machines, typewriters, and the like, are now in general use in the manufacture of steam engines, machine tools, electrical machinery, and nearly all mechanical products.

This has been brought about by a combination of two processes: (1) the standardization of methods of manufacture; and (2) the discouragement of the demand for special articles. Formerly the customer told the manufacturer what was wanted, and the latter hastened to produce it. Or the plans and specifications for a certain structure were prepared by a consulting engineer, and all bidders were required to conform to these documents in the minutest details; no two such specifications being alike. At the present time, the customer, knowing what he wishes to accomplish, seeks to do so as best he may by means of the standard articles in the market; or if it be a great engineering structure, the engineer specifies only the general requirements to be met, leaving each manufacturer to meet these with his own standardized product. The influence of these modifications in engineering practice extends to the manufacture and supply of materials. Large orders of standard shapes and sizes are the rule; and the small manufacturer who has been accustomed to procuring his detailed orders of varied parts finds that his business is hardly desired by the side of the large standardized orders of the great establishments.

The result of this concentration and standardization has been to

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reduce costs very materially and to render possible undertakings which would otherwise be prohibitory in price. While to a certain extent it has obliterated individuality in design, it has also removed much useless repetition, and has prevented needless expense in the production of rival machines, differing but slightly in design, yet requiring duplications of drawings, patterns, and tools. There is little doubt that it is to this wholesale development of various departments of engineering work that the rapid extension of the share of the United States in the work of the world is largely due. This being the case, it is interesting to observe its further progress; since the work of centralization and standardization is scarcely begun, and its rapid increase must be accompanied by corresponding economic changes.

This evident advantage in standardization has contributed to the success which has attended the formation of manufacturing combinations; the economy from the reduction in shop costs exceeding, in many instances, the gain due to the concentration of administration. Such advantage is cumulative, since the development of great industrial combinations creates markets for large quantitites of repetitive products. The result is a further demand for special machines, which can make one thing, or at most a few things, well and rapidly, with comparatively unskilled labor; and it is along these lines that recent machine-tool design is being evolved.

Another example of the concentration which attends recent engineering work is seen in the manner of utilizing hydraulic power in connection with the generation of electricity. Nearly all the discussions of the proposed developments of water-power have assumed that most of the electric current generated would be transmitted many miles to established cities and manufacturing centres, and would there be subdivided and distributed. In some instances, notably on the Pacific coast, where the water-power is so situated as to be difficult of access, this has been the case. Generally, however, the establishment of a large hydro-electric station has been accompanied by the local development of new industries, dependent for their existence upon a cheap and ample supply of power. The result is seen in the growth of the electro-chemical industries about the hydraulic power stations; and thus, instead of the generation of cheap electric power aiding in the subdivision of manufacturing, the reverse is found to be the case. The great electro-chemical works which are clustered about Niagara Falls are practically new creations of that source of cheap power; and the same is true at Neuhausen, by the Falls of the Rhine, and at Foyers, while the recently

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completed power station at the Sault Sainte Marie will doubtless be another such centre for industries in which great quantities of electrical energy form the principal operative element. In this connection it is interesting to note the successive methods by which the discharge of the Great Lakes is being utilized for power purposes. The waters of Lake Superior are now harnessed as they pass the Sault Sainte Marie, only to be again utilized at Niagara, and again at Montreal; while no small portion of the St. Lawrence water is diverted across to the Grasse river to be used at Massena, each mill grinding merrily with the water which has passed its predecessor.

It is a question whether electricity can ever be economically used for the smelting of metallic ores, the element of cost being considered insuperable. At the same time, there is every probability that it may be employed in auxiliary and preparatory operations. At the recent convention of the American Electro-chemical Society at Niagara Falls, a process was described in which magnetite iron ores of too low a grade for profitable direct smelting are passed through an electric furnace, the fusion zone of which is a magnetic field. The magnetic ore, being held in this field, is fused into agglomerated masses, and falls in lumps to the lower and cooler portion of the furnace; the product forming masses of concentrated ore, well adapted for final smelting in the blast furnace, and rich enough to be commercially valuable. The electric current required for this operation, being much less than would be necessary for complete smelting, brings the cost within practicable limits. Experiments have been made with the Stassano electric furnace in Italy, for the direct smelting of ores in the electric arc; and, while the operation is shown to be altogether feasible, reliable data as to costs are lacking.

Recent developments in the so-called science of aluminothermy are of interest. About three years ago Dr. Hans Goldschmidt discovered that metallic aluminum evolved an intense heat during its combustion. While high temperatures thus produced are necessarily costly, yet at the same time the importance of the operations involved may in many instances warrant the use of this process. In practice, the metallic aluminum is mixed with certain metallic oxides, according to the intensity of the heat required, and the mixture is ignited by a fuse in a crucible. The fluid mass may be poured out, when the maximum temperature has been reached, upon the point to be heated; a concentrated application thus being possible without requiring heat to be wasted upon surround-

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ing objects. One of the greatest advantages of such an operation lies in portability, since it is possible to work upon objects in place without involving resort to a furnace or other impracticable appliance. Thus, by use of the process the joints of the rails in an electric railway may be welded after the track has been laid; defective castings may have pieces "burned" on to them; and other operations may be performed.

A most interesting and practical application which has been made recently of this property of aluminum is found in the experiments of M. Léon Guillet in the preparation of alloys of aluminum. By mixing the aluminum powder with the oxide of the metal desired in the alloy, and igniting the mass in a crucible, the combustion of a portion of the aluminum furnishes sufficient heat to reduce and fuse the remainder of the charge, the result being a metallic alloy of the metals present. In this manner some results have been obtained which may prove of material industrial importance. Especially notable are the alloys of aluminum and nickel, and of aluminum and cobalt, these exhibiting an extremely high degree of hardness and strength.

Since the last quarterly review in these pages, the development of telegraphy through space by magnetic waves has continued. The cruises of the "Carlo Alberto" to Cronstadt and to Spezia, and the maintenance of wireless communication at all times with the station at Poldhu in Cornwall, have established the record of 1050 miles for overland transmission. The arrival of Mr. Marconi at Sydney, Cape Breton, has been followed by statements that definite messages have been sent across the Atlantic; but up to the time of this writing no details have been given out.

In this connection there has been more or less controversy as to the success which has been attained in selective space telegraphy. While it is admitted that transmitters and receivers may be "tuned" to a certain extent, so that no interference need take place, the value of this has been denied, because it has been shown that the very powerful waves emitted from a long-distance transmitter can break through such a tuning and impress themselves upon receivers in their vicinity, or at least cause confusion. This is only what might be expected. It is much the same condition of affairs as might exist in the case of individuals conversing in a room in two different languages and thus maintaining two private conversations, both of which would be disturbed or interrupted should any loud meaningless noise be produced by an outside party. Yet no one would think of denying on that account the usefulness or selective capacity of the two languages.

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So far as the use of any of the existing systems is concerned for naval purposes, however, this facility for disturbance is a material defect, as was clearly shown in the recent naval manœuvres in the Mediterranean, the signals being hopelessly confused by intentional magnetic disturbances.

Whenever wireless telegraphy is mentioned, it is generally assumed that the method involves the use of magnetic waves. That this is not necessarily the case, however, is shown by the recent successful experiments of Herr Ruhmer, in telephoning with the aid of a beam of light impinging upon a selenium cell. The experiments of Prof. Bell upon the variations in electrical resistance produced in selenium by the varying action of light are well known. Herr Ruhmer has extended these by uniting with them the variations producible in an electric arc by the action of a microphone transmitter. In the experiments recently made upon the Wannsee, near Berlin, two parabolic mirrors were employed, the arc light being in the focus of one mirror and the selenium cell in the other. It was thus found possible to transmit light waves over a space of seven kilometres, or nearly four and one-half miles, and convert them into articulate speech in a telephone receiver at the other end. While such a system cannot hope to compete with the immensely greater range of magnetic space telegraphy, yet it may replace the heliograph for certain departments of military communication.

A recent development of interest in connection with the electrical communication of intelligence is found in the so-called electro-typograph of Meray and Rozar, originally produced in Hungary. This apparatus may be considered as a combination of an automatic telegraph with a type-composing machine. Originally, the apparatus consisted of a key-board perforator producing a perforated strip which was used upon the Jacquard principle to control the operations of a typesetting machine. The special features of the apparatus lay in the use of electricity as a means of transmitting the various movements to the working parts, according to the perforations in the strip. The simple nature of the perforations renders the electrical transmission to the machine a matter readily accomplished, and the result is that the type-composing machine itself may be situated at any distance from the transmitter through which the strip is passed. The most interesting feature of the apparatus appears in the fact that one perforated strip may be used to operate simultaneously a number of typesetting machines in different places.

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This renders it possible for a central news bureau, for example, to transmit to a number of journals the intelligence of the day; the matter being written, or rather perforated, by a machine similar to a typewriter, upon a strip which, being passed through a transmitter, causes the type composition to be performed simultaneously and automatically in a number of distant cities. In like manner a number of journals in different cities, but under one management, may have all the matter prepared in one office and set up simultaneously and automatically for all in their respective offices.

Among recent matters of scientific investigation may be mentioned the repetition of two famous experiments. One of these, Foucault's demonstration of the rotation of the earth, has been performed under the same conditions as it was fifty years ago. In 1851, Foucault arranged a pendulum, consisting of a heavy weight, suspended by a wire from the interior of the dome of the Pantheon in Paris, so that its vibrations, being continually in the same plane, should show the movement of the pavement beneath, due to the rotation of the earth. The experiment was successfully performed for a limited time, but the political disturbances in connection with the *coup d'état* caused the work to be abandoned. The apparatus has now been reconstructed by the astronomer Flammarion, and the experiment repeated with entire success. The apparent rotation of the pendulum, indicating the actual rotation of the earth, agreed entirely with the computation.

The other experiment which is being repeated is that of the determination of the density of the earth by means of the comparison of the vibrations of pendulums upon and beneath the earth's surface. This experiment was tried by Airy in 1856 in a colliery in Wales, one pendulum being on the surface and the other in the pit 1,256 feet below. Although extreme care was taken to secure accuracy, the results varied materially from those deduced from the laws of gravitation, and the question has remained unsettled. The present experiments are being carried on at the Tamarack Mine, near Calumet, Michigan. The shaft at this mine is 4,550 feet deep, and hence a greater degree of precision may be expected. The work is under the charge of Major Hayford, of the United States Coast and Geodetic Survey, and every care is being taken to eliminate instrumental and operative errors.

In this connection attention may be called to some interesting and important work recently conducted by a party under the direction of Major Hayford in the measurement of geodetic bases on the ninety-

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eighth meridian from Nebraska to Texas. These base lines form a part of the triangulation extending in a north and south line across the United States from Canada to Mexico, being used to originate and check the system of triangles of which the survey is composed. Instead of following the time-honored method of measuring a base at one end of the system and then conducting the entire work of triangulation, occupying several seasons, before measuring the concluding and verifying base, Major Hayford selected locations for nine bases along various parts of the proposed survey, and proceeded to measure them all in one season, with one and the same party and the same set of instruments. By this method of proceeding a number of sources of error, both personal and instrumental, were eliminated; since it is very unusual for the same men and instruments to be engaged upon the finish of such a work as are in it at the start. The cost to the Government was also materially reduced by following this method. The intermediate triangulation may now be carried on from base to base, the verification of the work being accomplished as each base-line is reached.

Another series of measurements is to be made, in connection with a recent communication of M. Wilfred de Fonvielle to the French Academy, for the purpose of verifying the law of the barometric determination of heights. At the present time, the only method of determining the altitude of a balloon is by the indications of a barometer, showing the fall in pressure with the rarefaction of the atmosphere. It is now proposed to send up a balloon from the Parc de l'Aero Club, at Saint Cloud, carrying recording barometers, and at the same time to make trigonometrical measurements of the height of the balloon by means of instruments placed on the several platforms of the Eiffel Tower. The observations are to be made at night, sighting to a light suspended from the balloon, and it should be possible to compute the altitude reached very precisely. The recording barometer will then show the reading at the same instant, and a comparison should readily be made. The present value of the "barometric constant" used in the formula of Laplace has been determined by computation and from experiments made by Ramond in the Pyrenees in 1808; but the altitudes used in these investigations were so much smaller than those involved in aeronautical measurements that some further experimental verification of the law will be found acceptable.

Experiments with dirigible balloons continue, but nothing has been developed to show any material advance in the true art of navigating

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the air. In England, Mr. Stanley Spencer succeeded in travelling thirty miles in a machine consisting of a gas-bag seventy-five feet long, sustaining a motor of about thirty horse-power. This is a more powerful machine than has been used elsewhere, and in still air a speed of about fifteen miles an hour has been attained, but no authentic information is available as to its behavior in a wind. In France, the fatal results of the attempt of de Bradsky confirm the fact established by the death of Severo as to the folly of undertaking such experiments without proper scientific supervision. In the case of de Bradsky the absence of diagonal bracing rendered the wire connections of the car with the gas-bag altogether lacking in stiffness, as any bridge engineer would have seen at a glance. Experience such as this need not have been purchased at the price of human life; and if such trials are to be continued, the apparatus should be at least subjected to proper inspection. There is no doubt that the attempts to control and propel balloons will result in the development of lighter and more powerful motors; and the experience gained in their use may be of service in connection with subsequent work with aeroplanes.

The recent trials of the first of the new lot of submarine torpedo boats under construction for the United States Navy have attracted much attention. The two boats, the "Moccasin" and the "Adder," appear to have behaved remarkably well, and to have been under close control, both at the surface and when submerged. At the same time the board has decided that further trials must be made, since performances in still water are not altogether a criterion of what may be possible in the rougher waters of the outer sea. There is every evidence, however, that the principal difficulties in connection with submarine navigation have been solved — namely, those of control under water — and with improvements in motive power and electric storage, continual advances should be made.

The present submarines use gasoline engines of the Otto type for motive power when at the surface and for charging the storage batteries. These latter are of the lead-plate construction, using dilute acid as the electrolyte. There are thus two elements of danger present, the gasoline fuel and the gases disengaged by the batteries. It is altogether possible to employ an internal combustion motor, such as the Diesel, using heavy oil, together with a storage battery of the Edison type in which no gas is evolved; and there is every reason to believe that it is along such lines that the submarines of other countries are being devel-

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oped. For the United States the natural function of the submarine is in connection with harbor defence, since no blockading fleet would venture to remain within the radius of action after dark. In the case of France and England, however, the proximity of the coasts involves the possibility of the use of submarines as weapons of attack, with corresponding modifications in construction. In any case, the practical demonstration of the efficiency of vessels of this type must mean a transformation of naval warfare, especially in connection with coast defence.

In connection with the use of internal combustion motors for naval service, as in the propulsion of submarines, attention may be directed to the possibility of the employment of similar machines in land warfare. The trials of military automobiles made about a year ago, under the auspices of a British War Office committee, have just been reported upon officially.

The investigation grew out of the realization that the war in South Africa had shown the necessity of providing something besides animal power for the hauling of supplies and arms over the distances which there had to be dealt with. The experiments were most exhaustive, and the character of the ground was such as to test very effectually the capabilities of the machines under trial. It is interesting to note, however, that the vehicles which stood the tests the best were not considered as offering the most desirable features for army use. Again the question of motive power predominated. A majority of the machines tested were propelled by steam. Steam means water, and it also means a wasteful use of fuel. The result in actual warfare would be a supply train crippled for practically the same reasons which would affect animal haulage: the supplies for the motive power would absorb too much of their capacity. The report therefore recommends an internal combustion motor, this requiring little or no water, and being most economical of fuel; but at the same time it requires that the motor should burn heavy oil, the light hydrocarbons being too dangerous and volatile for such service. There is at present no vehicle meeting these requirements; but it is altogether possible for such a machine to be designed, and doubtless a new set of trials would find competitors of satisfactory construction entered.

The practical applications of electric power are continually extending, and the influence upon the labor question in manufacturing is worthy of consideration. Especially noteworthy is the extent to which

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electric driving has been introduced into modern steel-making. The great aim in this line of work has been to reduce the labor item in the cost, while at the same time increasing the output. At the present time, the iron from the blast furnace, instead of being cast into pigs, is hauled in a molten condition to the mixer, where it is poured in, mixed, and delivered to the converters, the manipulations being all effected by electric power. The ingots from the converter are handled over the soaking pits by electric tongs, and thence conveyed electrically to the blooming mill. In all the subsequent processes electric power is employed, with the single exception of the driving of the rolls themselves. In the new rolling mills now being constructed near Antwerp, in Belgium, however, electric motors of 350 horse-power are installed to drive the main rolls; the current for these being supplied from generators driven by gas engines fed with the waste gases of the blast furnaces.

Electric traction has steadily increased as a motive power for transport in cities and for interurban service, and its growth has been attended with some interesting developments. It has been generally assumed that electric power cannot immediately supersede steam locomotives for main line service. In Northern Italy, however, the steam railways have found the competition of the interurban electric roads make such inroads upon their local passenger traffic that they have been compelled to introduce electric traction, with frequent and rapid service, in order to hold their own. It is probable that the solution of the problem will be a subdivision of the traffic; steam locomotion retaining its preëminence for high-speed long-distance service, while the local traffic is cared for by the lighter and more frequent electric trains.

There is always something new to be learned about steel, and during the recent meetings of the British Iron and Steel Institute at Düsseldorf some most interesting and important facts about the heat treatment of steel were brought out. It has always been the accepted opinion that the proper way to prevent steel from being brittle, and to render it tough, was to raise it to a high temperature, say a full red heat, and then allow it to cool very slowly. The efficacy of this treatment was supposed to lie, to a great extent, in the time given to the operation; the heating lasting several hours and the cooling being prolonged through several days. Now, however, it appears that the real matter of importance is the temperature to which the metal is heated, the time having little to

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do with the result. In fact, if the steel is heated too high, the brittleness is found to be increased by a prolonged and slow cooling. If, however, the steel is heated to a temperature between 900° C. and 1000° C. for a short time, not exceeding a half an hour, and preferably less, and is permitted to cool in the air at once, it will be found entirely free from brittleness, being both strong and tough. This is a most important fact, since it is to brittleness that nearly all the failures in structural steel work are due. Heretofore it has not been considered possible to anneal the rolled shapes used in building construction, shipbuilding, etc., owing to the time and expense involved. The ability to insure freedom from brittleness by a rapid and regular operation, such as heating to a definite temperature and laying out to cool immediately in the open air, renders it possible to prevent all danger from brittleness. The well-known English metallurgist, Mr. Stead, put the matter very bluntly: "If, in the future, lives are lost by the failure of a properly designed steel structure, those who have neglected the reheating process should be held guilty of manslaughter."

Much attention is being directed at the present time to the introduction of devices for the protection of workmen from accidents. In some countries this is the result of legislation, either compulsory or in the nature of liability of the employers to damages. In other cases it appears to be part of the natural development of machine design; the provisions for protection being incorporated in the original construction of the machines by the builders, instead of being subsequent additions by the users. When proper and intelligent information is had by the designers as to the conditions under which machines are to be used, it is most desirable that the protection and enclosure of dangerous parts should be made by the builders, as best fitted to do the work efficiently. It is a notorious fact that workmen themselves are by no means foremost in advancing the use of safety devices. The safety lamp met with small approval from the miners themselves, and special precautions had to be taken to prevent the men from opening the lamps and exposing themselves and their comrades to danger from explosions. The arrangement of hoods and exhaust fans for the removal of the dust and grit of grinding machinery was also vigorously opposed by the men, on the ground that it would increase the number of applicants for the work and thus lower the exceptional wage rate which the dangerous nature of the employment gave it. Recent discussions and papers before the technical societies and elsewhere, however, show that this stage is pass-

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ing away, and it is becoming the exception rather than the rule to see dangerous appliances unprotected.

In the annual report of the engineer-in-chief of the United States Navy, Rear-Admiral Melville makes public some matters of general engineering interest which may be noticed here. Especially interesting are the results of the experiments in the use of oil fuel under steam boilers. These experiments were made both upon the tubular boilers of a vessel in actual sea service and upon a marine water-tube boiler in the Washington Navy-yard. The results of these experiments show that oil can be burned very uniformly and effectively. No injury to the boilers can be detected, although the evaporation may be forced to as high a degree as with coal. The principal advantage found with oil firing is its great convenience, together with the absence of the laborious efforts involved in hand-stoking with coal. Entire freedom from smoke has not yet been attained, although it is possible that success may attend further efforts in this respect; but on the whole the results of the experiments have been most encouraging.

The smoke question continues to attract interested attention, and the fact that the supply of smokeless anthracite coal is limited has been impressed upon the community and upon the engineering profession. With the smoke problem comes the question of dust, or, in short, the general question of the purification of the atmosphere. This subject received very intelligent discussion at the recent congress of the Sanitary Institute at Manchester. The removal of sewage and surface filth in cities has been undertaken with all the skill which engineering science can apply, partly because the pollution is heavier than the air and is visible and accessible. It is estimated that nearly a million tons of sewage are removed from London each year, at a cost of more than a million dollars. At the same time, about 300 tons of solid refuse are delivered up into the atmosphere every day, together with other objectionable matter, all of which, being carried up at first, is assumed to be disposed of without cost or effort. If it were attempted to remove the impurities from the atmosphere, or, rather, to prevent them from being delivered into it directly, it would require the construction of immense exhaust tunnels, through which the polluted air could be drawn by suction fans, to be replaced by purer air from above. The magnitude and cost of such an undertaking would be prohibitory, even if it were considered desirable; so that the better remedy must be sought in prevention.

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So far as manufacturing establishments are concerned, there is every probability that they may ultimately be supplied with power by electrical transmission from immense generating stations situated without the city limits. In such stations the introduction of proper furnaces would prevent the production of smoke, besides which it is probable that the superior efficiency of internal combustion engines would cause them to supplant the more primitive methods of securing the energy stored in fuel. The establishment of fuel-gas supply would solve the smoke problem so far as private residences are concerned; so that the whole matter is capable of prevention, which is far better than cure.

An interesting variation in the question of fuels available for the production of mechanical energy is seen in the applications of alcohol to internal combustion motors. By far the largest element in the price of alcohol lies in the tax which is placed upon it to regulate its consumption as an intoxicant. The facility with which a crude alcohol can be made from potatoes, from beet-sugar refuse, and similar materials, renders it sufficiently cheap to be feasible as a high-grade liquid fuel; and all that is necessary is to make its use as a drink impossible by the addition of benzine, gasoline, or similar material. Alcohol thus treated is in some countries relieved from taxation, and hence is coming into use as a fuel for automobiles, for small internal combustion motors for boats, and for stationary service. The use of alcohol under these conditions is attracting much attention in Germany and in France; and if corresponding arrangements with regard to taxation were provided in the United States, there is every reason to believe that an important and valuable industry might be developed.

Reference has been made in this magazine to the development in the use of reinforced concrete construction, in which the remarkable increase given to cement concrete work by the imbedding of metallic reinforcement was noticed. Recent experiments upon columns of this construction have shown interesting results. A column of cement or of concrete, when subjected to a heavy compressive load, usually fails by crushing, the body of the pillar swelling and bursting open. By winding the pillar with steel wire this tendency to burst is opposed, and the concrete is given opportunity to offer its full crushing resistance to the load. Experiments made by M. Considère, in France, show that such a winding of wire increases the strength of a column five to six times, while the cost of the additional material is trifling. Since the

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wire may be imbedded a slight distance below the surface of the cement, no effect is produced upon the appearance of the structure; while the increase in strength will greatly extend the useful applications of this form of construction.

The record of the work of the past few months would be incomplete without some reference to the establishment of the John Fritz gold medal. This foundation, established by the joint action of the four great national engineering societies of America, has been created in honor of the veteran ironmaster and engineer whose name it bears, and is to be awarded annually to the individual who shall be deemed worthy because of eminence in applied science. There is no limit as to nationality or sex; but the conditions surrounding the award are such as to make it beyond doubt the highest reward yet offered for the display of engineering ability.

HENRY HARRISON SUPLEE.

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LITERATURE.

History.

The first of twelve stately volumes of "The Cambridge Modern History"[1] represents a most interesting, if not wholly novel, scheme of historical composition, and comes with a valued personal association. The great coöperative work was fully laid out by that profound though little productive investigator, the late Lord Acton, whose plan has been faithfully followed by the actual editors, Messrs. A. W. Ward, G. W. Prothero, and Stanley Leathes. The general introduction and apology for the plan is from the learned historian of the papacy, the late Mandell Creighton, Bishop of London. Before discussing the merits and defects of the plan as such, it may be well to consider for a moment the material aspect of the book. It is made up of nineteen essays, averaging from thirty to forty pages each (large octavo), and written by seventeen contributors, each a specialist in the field allotted to him. Footnotes are wholly excluded; the narrative is compact and makes no parade of original sources. A very elaborate bibliography, arranged under the chapter heads, and an index complete the volume. The arrangement is almost ideal for the serious reader, though not for the professional student of history; but the mere layman, for whom the present writer speaks, would be glad of critical notes in the bibliography, and almost needs, such is his indolent habit, a few maps to save the parallel use of an historical atlas.

Certain advantages of the plan are clear: no single scholar could write a modern history direct from the sources. The separate chapters of this book are each the product of fundamental research, and the collective authority of the work is correspondingly greater than that of any one-man history. The informing idea of the work appears best in the words of the late Bishop Creighton:

> No guide is so sure for a historian as an overmastering sense of the importance of events as they appeared to those who took part in them. There can be no other

[1] The Cambridge University Press, Macmillan.

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basis of a truly sympathetic treatment. . . . Each separate writer treats of a subject with which he is familiar, and is freed from any other responsibility than that of setting forth clearly the salient features of the period or subject entrusted to him. The reader has before him a series of presentations of the most important events and ideas. He may follow any line of investigation of his own, and may supply links of connection at his will. He may receive suggestions from different minds and may pursue them. He is free from the domination of one intelligence — a domination which has its dangers, however great that intelligence may be — striving to express the multifarious experience of mankind in categories of its own creation.

All the advantages here soberly asserted of this history may be verified in the reading. To approach the great movements of the Renaissance from a dozen points of view does, indeed, give an impression of the infinite complexity of historical causes and of the wide reverberation of every decisive action. No one who has seen, for example, the Italian campaigns of Machiavelli's time from the side of France the invader, of Florence the temporizer, Venice the conservator of commercial supremacy, the German Emperor lured by various dreams, the Popes set upon the establishing of a temporal domain, can have failed to grasp the significance of an apparently confused and irrational movement. Absolute impartiality, even colorlessness, the Cambridge History may fairly lay claim to. Probably the world has not yet seen so great a mass of sterling historical narrative written with so little personal, political, or religious bias. These are no slight merits.

And yet the book will be read with great difficulty by the cultivated readers for whom it is intended — an almost inevitable defect of the coöperative plan. There is a laborious investigation and an interesting essay for the proper man in the history of coöperative scholarship. This future student will carry the story from Diderot's "Grande Encyclopédie" and the Benedictine founders of the still incomplete "Histoire Littéraire," through the lexicons and "grundrisse" to the Cambridge History. He will show how a consensus of academic style in France made such an undertaking as Petit de Juleville's "Literary History of France" relatively a success, while the Cambridge History was relatively, in respect of readableness, unsuccessful. The mere discomfort of passing from, say, the aridity of Mr. Leathes (on Italy and her Invaders), to the diffuse eloquence of Mr. Armstrong (Savonarola), and on into the closely packed periods of Mr. Burd (Machiavelli), and the quiet elegance of Dr. Richard Garnett (Rome and the Temporal Power) is insuperable to the average reader. Again Dr. William Cunningham (Economic Change), Sir Richard Jebb (The Classical Renaissance), and Dr. M. R. James (The Christian Renaissance) are

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stylistic incompatibles. Nor is this a minor defect. It seriously impairs the unity of the work and reduces it to a series of monographs.

Minute criticism of a book which represents the collective knowledge of a group of specialists would be absurd. It is possible, however, to point out, in the interest of succeeding volumes, failures of coördination and subordination. Chapter II, on the Colonization of the New World, might better have been reserved for a subsequent volume. For the purpose of a History of the Renaissance, a few dates and incidental mention of incoming treasure and of a career open to outgoing adventurous talent would have been sufficient. The separate treatment of that profoundly interesting, but comparatively unimportant, figure Savonarola is similarly out of proportion. Little more need have been said of him than is well said in Dr. William Barry's "Catholic Europe" (p. 648). As for Dr. M. R. James's admirable study of "The Christian Renaissance"— intrinsically one of the most erudite and original in the collection — it is literally smuggled into this book; for it deals with minute matters which had very slight echo in actual history during the period under discussion. But these and other deviations from consistency only prove that editors and specialists are but human; and, as the work progresses, a more rigid oversight of the contributions may fairly be expected.

The pleasanter duty of noting the excellence of many of these I have kept for the last. In a wholly familiar field it would be hard to imagine anything better than Sir Richard Jebb's "The Classical Renaissance." It is sober, enlightening, and in the best sense humane. For sheer historical narrative well handled and eloquently told, Dr. Richard Garnett's "Rome and the Temporal Power" is admirable. A similar praise fairly belongs to Dr. Horatio Brown's "Venice." The Rev. William Cunningham's account of the development of capital and credit during this period is a valuable supplement to the more formal history. The three essays which show most philosophic breadth, in an inexpert opinion, are Mr. Henry Charles Lea's "The Eve of the Reformation," Dr. Emil Reich's "Hungary and the Slavonic Kingdoms," and Prof. J. B. Bury's "The Ottoman Conquest." I have found the last-named study fairly fascinating for its clear presentation of the relations between fifteenth-century conditions and those of to-day. This is, perhaps, the highest office of history, to explain our own time to ourselves. And in Professor Bury's brilliant essay one may see the Eastern question declaring itself from the time of the first Ottoman successes — always a Christian power to seek a Turkish alliance, always a shifting fringe of con-

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tingent Macedonias and Albanias. If the Cambridge History will in each of its twelve volumes present a handful of essays of this quality, Lord Acton's great plan, which theoretically can achieve only a very partial success, will practically find the most substantial justification.

Criticism.

Professor Saintsbury deserves at least quantitative congratulations on the completion of the second of the three volumes of his work, "A History of Criticism and of Literary Taste in Europe."[1] For the curious reader, however, each new volume means an increased tribulation; the book grows progressively more difficult as it becomes more necessary to be read. It is hard, indeed, to imagine how a scholar of Professor Saintsbury's wide erudition and indefatigable industry has contrived to fall into so many and so irritating errors. Certain obvious merits of this history of literary opinion simply add to the feeling of grievance. Professor Saintsbury has probably read at first hand more literary criticism than any other man living, and where he depends upon second-hand testimony he tells you so squarely. Furthermore, he is capable of very nearly the best things in a literary way — witness the terse and sympathetic analysis of La Bruyère's critical position (vol. ii, p. 301); the subtile demonstration of the Addisonian meaning of "imagination" (p. 446); nearly all of the sections on Dryden and Johnson — you will go far to find better examples of sane, sturdy, enthusiastic appreciation. But these *loci*, as Professor Saintsbury would call them, are exceptional.

Professor Saintsbury is not only pedantic in expression, but also shows a constitutional inability to grasp the relative importance of things. With prodigious historical knowledge he is almost lacking in any sense for historic values. Petrarch, for example, is dismissed with a paragraph or so, under conditional promise, which remains unfulfilled, of returning to him in the second volume. Yet surely few men have done more toward the formation of literary opinion. A similar fallacy affects the treatment of Voltaire: he receives a bare four pages, against three for L'Abbé Batteux, apparently because Professor Saintsbury believes that the sage of Ferney was but a sorry critic. This may be true, and yet no man who has so profoundly moved and still moves the thought of Europe can safely be remanded in this fashion. Shall readers of the History of Criticism stumble into the nineteenth century

[1] Vols. I and II, Dodd, Mead & Co.

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without knowing what Voltairism is, just as they found their way into the fifteenth century without any idea of Petrarchism? It would be easy to multiply instances, but these must suffice for many.

As to the more important matter of impartial judgment, Professor Saintsbury shows an amusing incapacity to grasp the point of view of the classicists and to perceive how inevitable were their errors. I can conceive nothing, except Boileau at his worst, more unfair than the analysis of the "Art Poétique" in Volume II. One would imagine that Professor Saintsbury was dealing with a hopeless platitudinarian, not with one of the wittiest writers of all time, a critic who regulated French thinking for more than a century, and a man who, barring the inevitable concession to "*les règles*," was a model of the good sense and good taste he ever advocated. Equally unreasonable is the constant complaint against the men of the Renaissance for their neglect of earlier vernacular literature. The blame was not theirs. The Middle Ages had willingly let its best things die before the Renaissance was dawning. In the flush of the revival of antiquity and the creation of new literatures, it was impossible to sift out the very slender portion of mediæval literature from the great mass of mere writing. One may freely admit and even wish that the contemporaries of Racine, La Fontaine, Pope, and Voltaire had found time for the "Moral Gower," Marie de France, Chrétien de Troies, the Miracle plays, and the rest; but one cannot help suspecting that they had a better matter in hand, and that literature was distinctly the gainer that the "Gothick" revival waited for Horace Walpole and Bishop Percy.

Upon Professor Saintsbury's very interesting claim of preëminence for English criticism, I have no space to dwell. Certainly England has produced more of the tentative, non-dogmatic criticism which he affects than all other nations combined. He is suspicious of anything beyond wide reading and honest liking and disliking, which nobody can deny are *bona in se*. Philosophy of his own he appears to have none; and it will be interesting to see what he will do when he must treat the Coleridgean "omject" and "sumject," Lessing's distinctions between the arts, and the æsthetics of Schlegel, Schopenhauer, and Hegel. Those who are quite of Professor Saintsbury's opinion will most regret to see him less a critic or historian than a belated combatant in battles long ago, and to note an apparent carelessness of thinking which goes far to vitiate great learning, untiring scholarship, and a temperamental relish for the best in literature.

It is somewhat puzzling to an ingenuous reader to discover that,

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while Professor Saintsbury finds four perfunctory pages sufficient to summarize Voltaire's total achievement as a critic, Professor Lounsbury needs four hundred and fifty to set forth merely Voltaire's criticism of Shakespeare.[1] And, in fact, if Professor Saintsbury's method is too short, Professor Lounsbury's is somewhat too long. This is partly the result of a zeal by which the reader, on the whole, is the gainer. Professor Lounsbury bears a personal hand in the battle which Voltaire rashly engaged with Shakespeare's renown, and writes constantly as if Voltaire were a modern professor with a detestable rival theory. Indeed, in such case Professor Lounsbury would undoubtedly observe a greater moderation. All this makes the book eminently vivacious, if it somewhat obscures the writer's critical outlook.

That the obtuseness of Voltaire in the case of Shakespeare is irritating must be admitted. During his English visit of 1726 Voltaire acquired a superficial knowledge of the English Drama. On his return to the Continent he communicated his discoveries in various ways. He wrote, for example, in the revised edition of the "Essay on Epic Poetry," that nothing more "monstrous and absurd" could be imagined than what is found in Shakespeare, but also admitted "beauties, all the more remarkable because they are lightning flashes which have sent forth their gleams in profoundest night." He soon began to appropriate these beauties for his own plots, and finally in "La Mort de César," played 1735, presented such an "improvement" on "Julius Cæsar" as the English had for a century been fabricating for the more popular plays generally. In short, Voltaire's critical attitude was about that which English people of taste then professed; and if, as he boasted, he had introduced Shakespeare to the Continent, he had introduced him in the spirit of the showman who exhibits an amiable savage.

But the savage, like Voltaire's own Huron, gradually found favor and threatened to rival the showman. Under these circumstances, it was natural that patronage should turn into disgust, and disgust into an indignant sense of wrong, which was far from nice in its expression. It would be impossible at this time to follow, even in its main outlines, the controversy interestingly chronicled by Professor Lounsbury; suffice it to say that, as English defenders of Shakespeare arose, and defamers of the French dramatists, Voltaire's uneasiness grew, until Shakespeare became his especial literary detestation. Mrs. Mary Wortley Montague, Lord Kames, and Walpole (half-heartedly) took a hand in the battle. But it was the French apologists for the inspired savage which

[1] Shakespeare and Voltaire ("Shakespearean Wars," Vol. II), Scribners.

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most aroused Voltaire's wrath. Anonymous articles on Shakespeare and Otway, in the "Journal Encyclopédique," provoked an "Appeal to All the Nations of Europe." Le Tourneur's translation of 1776, and especially its prefatory praise of Shakespeare, brought from Ferney a letter to the Academy which D'Alembert read on August 25, 1776. The aim of this rather ignoble production was to prove that Shakespeare's plays were morally vile, and to vindicate the superiority of the French over the English Drama. It was the meanest move in a controversy which had been waged intermittently for some forty years.

It is, as Professor Lounsbury concedes, a depressing subject. It would have been less so if Professor Lounsbury had approached it with that sympathy which understood, while not approving, the false logic under which Voltaire labored. There is too constant a tendency to measure him by the standards of to-day, too great a willingness to imagine a personal depravity in Voltaire's manner of attack and defence. The painful collation of coarse and obscene phrases for the "Letter to the Academy" was discreditable; but Professor Lounsbury does not seem to appreciate a state of critical opinion in which a single "base" expression ruled an author out of court. Voltaire was always so sure of his case that he let his argument take care of itself. Professor Lounsbury's argument is throughout infrangible, but he gives an almost equal impression of special pleading. To us of the twentieth century it is less important that Voltaire was wrong in a capital matter of criticism, than it is to know how he came to be wrong. Professor Lounsbury is too impatient of the whole pseudo-classical doctrine to conduct this investigation sympathetically. It is, however, refreshing in a dilettante age to find two quiet scholars like Professors Saintsbury and Lounsbury putting more enthusiasm into an outlawed quarrel than most of us can command for the pressing issues of to-day. Nothing that is said of the critical limitations of Professor Lounsbury's book impairs its value as a learned and vivid summary of one of the most important literary controversies. But I shall personally be glad when the scene of his "Shakespearean Wars" is again transferred to England, where he moves more genially and with more confident tread.

Biography.

If there were no other term to include the three contemporaries, Hawthorne, Tennyson, and Millet, of whom important biographies are at hand, there would be at least the common bond of complete unworld-

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liness. Something of this there always is in the artist; but it is doubtful if there could be found three more perfect examples of personal ideals steadfastly followed, of a kind of placid indifference to the counsels of worldly wisdom which transcends the customary revolt of the artist against the conventional. Of mere eccentricity, indeed, there was nothing in these three great artists. They simply let the world go because they had a better occupation than to sink themselves in its average concerns. Hawthorne won a measure of recognition; Millet received tardy honors; Tennyson became the recognized spokesman of the finest feeling of his age and nation. Yet in every case it was the world that came to the artist, not the artist that condescended to the world. All three lacked that intimate contact with the great public by whose will, after all, the artist lives, which a Shakespeare or a Molière had constantly; and one notes in all three a certain melancholy arising from isolation. Hawthorne has left on record in a score of instances his sense of the vanity of literary ambition; Tennyson wrestled with a constant moodiness and passed his declining years in something like settled discouragement; Millet, with a sturdier sense of the value of the sacrifices he had made, writes: "Sorrow perhaps gives the artist his strongest incentive to self-expression." This is enough to establish a kind of spiritual kinship between them, different as were their clime and their achievement.

Hawthorne, by a few years the eldest of the three, adds a certain waywardness to the habits of the recluse, and is the most difficult to realize as a moral entity. Yet he who pretty effectually evaded his contemporaries has not eluded his latest biographer, Professor Woodberry. In all larger aspects this book[1] is admirable. It never forsakes the chronological line, and yet finds room for thorough criticism and comment, even for minute bibliographical information. It is a unit, and not, as are so many biographies to-day, a collection of loosely related essays. For all his early period, that of unbroken solitude in "the chamber under the eaves" at Salem, Hawthorne has left us abundant confessions in letters and in his literary works. "For the last ten years," he writes to Longfellow in 1838, "I have not lived, but only dreamed of living." Probably no genius of his rank, not a vowed recluse, has dwelt so thoroughly apart from the world as Hawthorne in the years from twenty-one to thirty-five, the years which should through matching one's individual strength against the world bring serenity of spirit

[1] "Nathaniel Hawthorne," by George E. Woodberry; Houghton, Mifflin & Co.: (American Men of Letters.)

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and power. This kind of strength Hawthorne never got, nor had he that confidence in his own powers which makes for happiness. He never had even that savage but sustaining joy of scorn of the world. His tendency was rather to scorn himself. Low vitality appears in all his thinking, and he escapes from it in his supreme works only. He never did for long the journeyman work of a man of letters, and to the end his production was painful, partial, and intermittent.

In his forty-second year, and twentieth of authorship, 1846 — the year of publication of "Mosses from an Old Manse" — he had to his credit one hundred tales or sketches, many small in extent and slight in texture. He had given evidence of a remarkable, if somewhat dry, perception of New England country life, of a marked allegorizing tendency, and of an almost morbid persistency in the use of physical symbols — the "Minister's Black Veil," for a striking instance. His achievement, if exquisite in quality when at its best, was on the whole tenuous and unreal. It was novel chiefly in its power to illuminate the darker recesses of the Puritan conscience, and this it did with a lack of essential simplicity. At forty-two his work was still tentative, immature, and, except to the most discerning readers, inconsiderable. One might imagine the years of voluntary seclusion, the flickering hopes of literary greatness, and the bitter experience of extreme poverty most inadequately repaid by the fame of a minor writer and the confident expectation of his wife and a friend or two.

If one had so judged, the publication of "The Scarlet Letter" would have abruptly changed the verdict. In that book Hawthorne put the quintessence of all qualities which lay potentially in his previous work — an extraordinary power of visualization, a sense for the physical symbol, and a relentless pursuit of the symptoms of disordered conscience. By "The Scarlet Letter" he stands or falls. It is surprising, then, to find that Professor Woodberry regards the book as a *tour de force* resulting from a masterly misrepresentation of the Puritan idea of sin and punishment. I have put crudely what is better expressed in his final word on "The Scarlet Letter:"

> Its truth, intense, fascinating, terrible as it is, is a half-truth, and the darker half; it is the shadow of which the other half is light; it is the wrath of which the other half is love. A book from which light and love are absent may hold us by its truth to what is dark in life; but, in the highest sense, it is a false book. It is a chapter in the literature of moral despair, and is perhaps most tolerated as a condemnation of the creed which, through imperfect comprehension, it travesties.

Here is a double charge: first the characters in "The Scarlet Letter"

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act upon a false morality — this one might concede; second, they act in ways abhorrent to Puritan human nature. If this be so, they are but morbid phantoms of Hawthorne's imagination; and Arthur Dimmesdale, Hester, and Roger Chillingworth are no more real than the metallic forest in Baudelaire's "Fleurs du Mal." Professor Woodberry might well hesitate to accept the full implication of his own criticism. To say that both Chillingworth and Dimmesdale represent a perversion of the Puritan spirit may be true; but was it not a common and a characteristic perversion? No one who has faced the awful hazard of election unto eternal damnation, and speculated upon the sin without forgiveness, will find any difficulty in seeing the motives that actuate Hawthorne's *dramatis personæ*, and in accepting their actions as probable, and even natural. The dramatic, the almost sensational, methods of the book, are superficial, and affect only the *mise en scêne*. So far, I believe, many will take issue with me against Professor Woodberry. But his general judgment that "The Scarlet Letter" is a masterpiece of the narrower, tenser, and gloomier sort can hardly be gainsaid; while his statement of Hawthorne's detachment from his own creations seems fairly conclusive:

> This stoicism, which was in Hawthorne, is a primary element in his moral nature, in him as well as in his work; it is visited with few touches of tenderness and pity; *the pity one feels is not in him, it is in the pitiful thing*, which he presents objectively, sternly, unrelentingly.

This certain undeniable hardness of his genius is in striking contrast to his shy, friendly personality. This side of the man is very fully and attractively displayed. And yet it is hard to believe that he felt great personal tenderness beyond his immediate family and his friends, Bridge and Pierce. People and causes alike failed to engage him. Transcendentalism, the abolition movement, and the civil war found him an amused, an indifferent, or at best a mystified, observer. It may have been some casual infelicity that sent the chills down Whittier's back during his single call on Hawthorne but it is certain that Hawthorne never fully learned to live on terms of frank intercourse with his equals. Whether a more normal life and an earlier success would not have broadened and humanized his genius is an idle speculation. It might have impaired that authentic provinciality — in the works, not in the man — which Professor Woodberry justly rates so highly. It is pleasanter to recall that he won success in his own way, and that his last book, "The Marble Faun," if it lacks the constructive quality of his earlier works, shows that his soul was hospitable to the charm of an

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alien civilization, and that his relentless morality was at the last tempered with a finer tolerance and hope of reconciliation.

These are a few of the many considerations that Professor Woodberry's sympathetic biography raises; and in this case the reviewer is happily relieved from the temptation to say everything at once, for the book is a permanent contribution to literature, and will surely attach itself to Hawthorne's lasting fame.

Sir Alfred Lyall's "Life of Tennyson"[1] is rather a critique than a biography. The remembrance of his friend's dislike of publicity has undoubtedly influenced the biographer in this matter, and the reader is likely to find the narrative somewhat barren of incident and lacking in personal quality. Considered as a discussion of Tennyson's poetry, it has many quiet excellences. Wanting salient stylistic features and following the consensus of critical opinion, one is likely to underestimate its breadth of view and essential soundness. Proper emphasis is laid upon the rhetorical value of Tennyson's poetry — a concrete merit which is too little regarded by critics with an impressionistic or an ethical bias, but which is likely to set Tennyson beside Spenser as "a poets' poet." Sir Alfred Lyall also shows how fully Tennyson partook of all the poetical tendencies of his time, though yielding to no current eccentricities. It is this that places him "in the right apostolic succession" of English poetry. Arnold outranks him in consistency of poetical creed, Browning has a fuller vitality and more penetrating harmonies, though rarely; Swinburne possesses greater, if an ill-regulated, virtuosity. Yet all three could better be spared than Tennyson. He is the epitome, not of the best thinking, perhaps, but of the finest feeling of the Victorian age, everything that a follower of Keats and a contemporary of Newman and Huxley should have been.

An artist to the finger tips, so far as the fair ordering of words was concerned, he was always in danger of accepting the sentimental for the sublime, and of mistaking the excursions of an ardent spirit for advances toward general truth. Upon this average British quality, with its leaning towards "prettification" in art and emotionalism in philosophy, Sir Alfred Lyall rightly insists. It is fundamental in the character of Tennyson, and the cause of his supreme merit. That isolation, in virtue of which Tennyson is associated with Hawthorne and Millet, was apparently acquired rather than constitutional. It was less the result of deliberate choice than the natural reaction of straitened circumstances and lack of appreciation upon a sensitive nature. If, curiously,

[1] Macmillan: (English Men of Letters.)

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his dread of the throng and his distaste for miscellaneous associations became more marked as his fame and the allurements of social opportunity increased, this isolation he intuitively sought as the condition of responsiveness to the great emotions of his time. In his capacity of seer and prophet he dwelt in the desert, where his vision was clearest and his utterance gained clarity and force. It is this detachment that made it possible for him to respond only to the nobler emotions of his age, rejecting cheap contemporaneity; while his essential community of thought with the people for whom he wrote prevented entanglement in metaphysical webs of his own weaving — snares that Arnold's "ineffectual angel" constantly laid for himself. The solitude of Tennyson, then, has something priestly and vicarious about it, and is far less personal than that of Shelley or of Hawthorne. This is shown in the fact that while no one would go to Shelley or to Hawthorne in a spiritual emergency, many an indignant spirit has made "Locksley Hall" its own cry for social justice, and thousands of bewildered souls have found in "In Memoriam" marvellous consolation.

Tennyson has so completely expressed our own thoughts that there is a very general agreement as to the relative rank of his poems. Nobody will dispute that the best of his poetry was written by 1850, the year of "In Memoriam," except such as maintain that "The Idylls of the King" are to be included in his best work. These neo-Arthurians have Sir Alfred Lyall against them. With Sir Alfred Lyall most readers will see in the Idylls a certain Victorian diffuseness in thought, feeling, and expression which takes them out of Tennyson's highest work. In the conclusion that Tennyson the artist, the creator of beautiful scenes and the weaver of lovely verse, is likely to outlive Tennyson the seer, those who have tested the seer's message and found it good will be loath to concur. But time has ever had an ungracious habit of refusing to convert temporary utility into permanent profit; and it seems likely, as is also the probability in Whitman's case, that Tennyson's more casual and spontaneous production is to be his most durable monument.

Jean François Millet's achievement is singularly consistent and complete. Suffering far more than Hawthorne from poverty and neglect, he accepted his isolation with a rare serenity as the condition of being true to himself. Unlike Tennyson, who sallied periodically into the stress of the general life, he set himself with a greater simplicity than either to understand the smaller life that lay about him and to express it with a largeness and directness which humbler art had previously seen

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only in Rembrandt. The oneness of the soil and the man who tills it, the correlation of the progress of the seasons and the passing of each day with the ordinary human duties and the customary moods of men he felt intuitively. A noble and expressive line came to him by nature, and he early learned the secret of simplified and harmonious color. His artistic equipment was early and easily won, and when he felt it to be adequate he put aside experiment. In fact, his preoccupation with the subject and the idea was such that technical matters hardly were a serious concern to him. It is, perhaps, for this reason that his charcoal drawings and pastels, done with great economy of workmanship, are in general more accomplished and complete than his more labored oil paintings. He was almost free from the irritability of genius. He married early, and throughout his life accepted the heavy cares of a large family and a straitened household. To material was added physical distress. The dreaded nervous headache was never far distant.

Naturally the record of such a life is wholly lacking in incident and somewhat gray and monotonous. It is, however, a story too instructive and fortifying to leave untold, and Mrs. Henry Ady[1] ("Julia Cartwright") has done well to translate all the memorials of Millet and gather them, with sufficient illustrations to show the range of his genius, into a volume for English readers. Naturally the biography, begun by Sensier and finished by Paul Mantz, has served as the basis of this work; but Mrs. Ady has gleaned faithfully from various sources, and has fully utilized all the extant material, with the exception, perhaps, of the memoirs of William Hunt. The simple, at times almost Biblical, style of the peasant painter suffers very little loss in translation, and Mrs. Ady's book includes nearly all the material that is worth preservation. Her modest part of supplying the narrative links, if marred by occasional exuberances, is well performed.

The struggles of Millet, lightened by the care of Sensier, and brightened by the friendly services of Rousseau, Diaz, and the American, Hunt, are only different from those of the peasants, whom he loved to paint, by reason of his consciousness that he had a valuable message to give to the world, which the world would not hear. Against this neglect he seldom rebelled. He had said when, stung by the title, "the master of the nude," he left Paris: "When I set my foot on the grass, I shall be free"; and he cheerfully paid the price of freedom in long poverty and obscurity. Fortunate and thrice-blessed is that artist

[1] "Jean François Millet: His Life and Letters;" (9 photogravure illustrations.) Macmillan.

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whose life follows naturally the ideals of his art. Almost everything that Millet has said about his painting might be applied to him personally. In a letter to Sensier, which accompanied those three great paintings, the "Woman Drawing Water," the "Woman Feeding Chickens," and the "Sheep Shearing," Millet writes:

> I try to make things look as if they were not brought together by chance or for the occasion, but were united by a strong and indispensable bond. I want the people I represent to look as if they belonged to their place, and as if it were impossible to imagine that they could ever think of being anything but what they are. People and things should always be there for a definite purpose.

He believed that things had a kind of inherent beauty which it was the duty of the artist to detect and reproduce, and was an enemy of all academic ideals of the beautiful. And yet, though depending upon the inspiration of the life about him and calling himself "a peasant of peasants," he neglected none of the means of culture. He read, as only persons of serene and leisurely habit can, Dante in the Italian, Shakespeare and the Greeks in his own tongue. He planned to illustrate the Idylls of Theocritus — a fact which should prove that his view of the life of the soil had no tinge of socialism or pessimism. Of course this was charged, especially of "The Man with the Hoe," long before Mr. Markham had composed resonant blank verse on the subject. Such interpretations merely amused the artist, and he set himself the more resolutely "to putting things in their place" — to seeing the orderliness and beauty of life near the soil. In his painting, too, he respected the great traditions. His vision of life was his own; but to express it he studied profoundly Michael Angelo and Correggio, and drew something of collateral inspiration from the primitives.

The unworldliness of his nature is shown in his relations to Sensier, who became his banker, landlord, agent, critic, and biographer — and always stood his friend. Mrs. Ady insinuates that this relation was not disinterested on Sensier's part — an allegation which lacks proof, and, if made, should be proved. Whatever be the truth of that matter, Sensier was a good agent; and but for his constant services, Millet would hardly have kept heart to proceed toward his final success.

Fiction.

In the sea story "Typhoon,"[1] Mr. Conrad gives us less than usual of the atmosphere of a mysterious "somewhere East of Suez." If his background is as vast as the China ocean and the sinister recesses

[1] G. P. Putnam's Sons.

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of the air from which the typhoon descends in wrath, his immediate scene is no larger than the freighter "Nan-Shan," Clyde built, and flying the Siamese flag from Bangkok to any point in the narrow seas. The ship is the hero, next to the ship Captain MacWhirr — a man as incapable of harboring a fancy or a novel idea as he was of neglecting a recognized duty.

He found very little occasion to talk. There were matters of duty, of course — directions, orders, and so on, but the past being to his mind done with, and the future not there yet, the more general actualities of the day required no comment, because facts speak for themselves with overwhelming precision.

If the "Nan-Shan," stupidly driven through the centre of a typhoon, is the hero, the mate, Jukes, is the chorus of the sea tragedy. A hero, too, in his way, he feels his own courage and fears, shrinks with every blow that seeks the life of the devoted ship, appreciates the mad energy of the engineers deep below the scourging of the great seas, the abject terror of the crew, the horror of the hell of coolies in the forecastle. Towards others Jukes is efficient. He heartens the sailors, ropes in the fighting, struggling mass of Chinamen that falls with a "five ton" impact upon the ship's side as she swings; but generally he feels himself and the situation in a way we are wont to call artistic; and if we see the terror of that unequal battle with the cruellest of winds and seas, we see it chiefly through Jukes' eyes.

The story, it will be seen, is not unlike Mr. Kipling's "The Ship that Found Herself"; but it avoids the rather mechanical impersonation of that thrilling tale. Mr. Conrad's ship is not unduly affected with nerves. She is a veritable ship suffering under the uttermost stress of wind and wave, but chiefly interesting as the receptacle of a varied life, which strives, endures, cringes, and rages. And the literary manner, too, is more sober and veracious than that of the story we have mentioned. The paragraph describing the first onslaught of the typhoon illustrates Mr. Conrad's command of niceties of stylistic effect, his power of conveying simultaneously the physical fact and its moral effect:

It was something formidable and swift, like the sudden smashing of a Vial of Wrath. It seemed to explode all round the ship with an overpowering concussion and a rush of great waters, as if an immense dam had blown up to windward. It destroyed at once the organized life of the ship by its shattering effect. In an instant the men lost touch of each other. This is the disintegrating power of a great wind. It isolates one from one's kind. An earthquake, a landslip, an avalanche, overtake a man, as it were — without passion. A furious gale attacks him like a personal enemy, tries to grasp his limbs, fastens upon his mind, seeks to rout his very spirit out of him.

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The passage well illustrates the technical excellences which make Mr. Conrad one of the greatest craftsmen in fiction to-day. How great an artist he is can be decided only when his peculiar kind of impressionism has had a longer test.

Poetry.

The poetry of Father Tabb is so familiar in the magazines and so unobtrusively good that few of us realize how nearly perfect it is in its kind. This will be the reflexion of every lover of poetry who comes upon the little book of "Later Lyrics," published by Mr. John Lane. A certain alertness of fancy which recalls at once Herrick and the lighter productions of the metaphysical poets is Father Tabb's distinctive quality. The simplest object suggests a figure or a philosophy; and if in these poems a few lines long he merely grazes deeper issues, he flutters as unhesitating to the brink of some abyss of thought as he engages in the momentary pursuit of a rare metaphor. He shows, as his poetry reveals him, the attractive conjunction of playfulness of mind with gravity of soul. His instrument is of small range, but he knows its modulations thoroughly, and his brief melody carries the suggestion of larger strains. The best of his verse should last with the best of Emerson, and not disgrace its company. These qualities, the challenging mind, the ready conceit for a novel thought, the suggestion of a wider application, rare integrity of style, all appear in the following poem:

WOOD-GRAIN

This is the way that the sap-river ran
From the root to the top of the tree—
Silent and dark,
Under the Bark,
Working a wonderful plan
That the leaves never know,
And the branches that grow
On the brink of the tide never see.

Frank Jewett Mather, Jr.

That a valetudinarian printer and a somewhat ridiculous person should at the age of fifty create a new kind of literature, and toward sixty produce what remains almost its highest example, is one of those mysteries with which the Providence that guides the course of letters loves to bring to naught the wisdom of the wise. As one runs over the list of initiators — Petrarch, Marlowe, Montaigne, Corneille (for example) — Samuel Richardson takes on a parvenu aspect. They would certainly have repudiated the author of "Clarissa Harlowe," while he as certainly would have found none of our four, with the possible exception of Petrarch, whose com-

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pany he could have tolerated or whose intellectual manners he could have approved. Yet none of these greater figures has gained so great a following, or so profoundly altered the taste of many nations. Mr. Dobson in his little book on Richardson[1] does not tell us how a man of narrow intelligence, conventional morals, and keyhole habits of observation emerged in middle life as the first great novelist and the founder of the school of sentimental realism. He does, however, give so vivid and circumstantial an account of Richardson's daily walk and conversation that the marvel of his literary greatness is much enhanced.

John Ruskin, who, significantly, was an avowed admirer of Sir Charles Grandison, had throughout something of Richardson's valetudinarian quality. But his peculiar kind of mental invalidism expressed itself in terms of poetic prose and in a feverish attempt — relatively a successful one — to force a dull generation to perceive beauty in nature and in human life. His friend and biographer, Mr. Frederic Harrison,[1] has, it seems to me, partly confused a want of logical coherency in Ruskin's message with a want of influence. The book is not an ungenerous one; it contains, indeed, one of the finest tributes to Ruskin's personality; and the rigorous application of logical criteria to Ruskin's social teaching is made in a spirit of fairness. But, on the whole, the essay has a tendency to work on the principle of exclusion; to show what Ruskin was not rather than what he was. I feel that Mr. Harrison, in his very valuable book, has hardly explained the reasons for Ruskin's power and influence.

Colonel Thomas Wentworth Higginson's two recent biographies — "Longfellow"[2] and "Whittier"[1] — differ only in subject and imprint. Each is the tribute of a friend to a friend; each has the merits that come from the intimate view, and the defects that arise from lack of critical detachment. Longfellow was for two generations Colonel Higginson's neighbor, and was bound to him in community of taste as well as by those more formal bonds which Boston is so fortunate in establishing between its best spirits. It was inevitable that Colonel Higginson should approach his task in the spirit of a club mate. Whittier was in a sense his ethical master. The books are *mémoires pour servir* — collections of material which only their author could contribute. Some day a skilled bookmaker will extract from these two volumes a book smaller than either, entitled "Personal Reminiscences of Two New England Poets." To many readers, who accept the books as they are with gratitude, it will seem a pity that Colonel Higginson has not made that book himself.

Among the many reprints and new editions of standard literature, the Virginia Edition of Poe,[3] in seventeen small volumes, is perhaps the most interesting. The three editors, all now or formerly connected with the University of Virginia, assert first, that they have restored the text of Poe to the form in which he left it, and, next, that they have added to the body of his works three volumes of previously unpublished writings. The question of the text remains an open one. A scholarly reviewer in the "Nation" for December 5 declares that Griswold had Poe's manuscript authority for all changes which first appear in his edition. The "Nation" reviewer also declares the charge that Griswold re-wrote several of the papers in "The Literati" to be absolutely false. These matter remain under adjudication. Meanwhile there is unquestionably a considerable ingathering of Poe's minor papers to be credited to the Virginia editors.

[1] Macmillan: (English Men of Letters.)
[2] Houghton, Mifflin & Co.: (American Men of Letters.)
[3] T. Y. Crowell & Co.

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PAINTING.

MANY painters note, with regret, that the general public sees more in sculpture than ever it does in painting, apart from the mere story-telling of it. The explanation of this phenomenon is that the uninformed beholder can see all around the work of sculpture, or at least can see into it deeply, and that he understands dimly that its surfaces reproduce more or less exactly the solid forms which nature has held up to him during his lifetime, whereas the flat surface upon which those forms are in a way represented is a mystery to him and remains so. That is, indeed, the *crux* of the whole matter of "artistic criticism" of every sort, from the most elaborate analysis by Armstrong or Stephenson or LaFarge, writing carefully, to the chat of Sunday visitors. Painting is so very abstract and remote from reality. Painting is so purely a convention. It is hard to say whether the representation of objects in full color, or such representation in mere light and shade, as in a crayon drawing or an etching, is the more completely a convention. In the one case you have the abandonment of that which is so important to us in the external world — the colors of things; in the other case you have the retention of that important part of external nature. But then the work of close representation becomes so much more difficult by the admitted addition of the colors of things, that other abstractions of all sorts have to be introduced into the work, in order to give it unity and to make one agreeable design out of what would otherwise be a confused medley.

"To make an agreeable design" — that is, after all, the purpose of the painter. When Ruskin says that one ought not to call himself a judge of painting unless he can tell a good picture from a bad one by a side glance as he goes along the gallery — I quote from memory — he is referring to that matter of making a good design. Much as he has preached the contrary doctrine, the doctrine which to many of us seems a heresy, namely, that a painting is more or less good as it represents nature more or less closely, he always retains so much sense of the verities of fine art that, in such dicta as the one just cited, he states the truth about it, as it were, unconsciously.

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Why is Homer Martin one of the chief of modern landscape painters? It is because every one of his compositions is a beautiful design. Why does an able English critic, speaking of a contemporary artist and comparing his work with that of Franz Hals, both as work of pure technique and as artistic work in the general sense, distinguish sharply and say that his modern paints as well as Franz Hals ever painted, while it must be confessed that he is far from being as great an artist as Franz Hals? The meaning is that, if you examine the handling of the brush, and the choice, the preparation, the combination, and the laying on of the color, you will find that in this as in the precise setting down of forms, the modern is as able an executant as the seventeenth century artist was; but that if you ask what the artistic intention and the artistic result was, in both cases, you will find that Franz Hals is a great and rounded genius, complete on every side as far as his work required completeness, armed at all points, and, in short, a producer of admirable designs admirably carried out. Franz Hals, according to this writer, was one of the greatest of portrait painters, and could bring together a dozen portraits into one composition, or satisfy the eye and the mind of the spectator with the treatment of a single head, with the arms, hands, pose of body, and combination of surfaces, as of skin, of leather, of silk, of felt, and of steel, so as to produce in every case a great and satisfying design; whereas it could not be said of that modern, or of more than one here and one there among all the moderns, able as many of them are, that such perfectness of result was discoverable in their work.

That is where the many-sided, restless, and discontented modern spirit leaves us. Things are better, now that the world has come to understand; they are a shade better in that we realize the fact that nine-tenths of our intelligence and ninety-nine one-hundredths of our energy goes into money-making, and what is immediately connected with it in the way of scientific discovery, administration, and the like. Things are better, now that this is clearly understood, than they were seventy years ago, when there was still a vague hope that all good things would come with democracy, and that the artist must of necessity rise to greater heights than were ever known, because the world itself was going to be greater, and that, right away. Should not art grow and expand with the growth of the world? Now we know that only by great care, constant attention, and the distinct effort to detach our arts from the questions of money-making, only by the devoted self-sacrifice of a certain small number of able men who might make fortunes in

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other lines but who prefer to live unknown and to paint, can art be kept alive at all.

Things are better, therefore: there is nothing like looking facts in the face and knowing the worst. The artist can still find appreciation among his fellow artists, and sympathy from the small body of those who are not exactly his fellow artists, but who are in close touch with them in the ways of regarding the external world and society. A competence is assured to every one who has ability enough to be warranted in devoting himself to the artistic career. It is, of course, a hindrance and an annoyance for these to see, thrown into the community every year, from two to three thousand graduated pupils who can never by any possibility become artists, and who have yet to spend months and years of worried anxiety before they ascertain the fact that no such career is possible for them. That false hope is an annoyance and a distress to the pupils themselves, to their relatives, and to the teachers who have taught them as it were under protest. It is also a loss to the community, which always loses by uneconomic conditions. And yet, in spite of all this, the condition of the graphic arts, as of the plastic arts, is steadily improving.

It is in mural painting that the greatest advances have been made, at least in the United States. The introduction of such art into this country is of very recent date. It was during the last fifteen years of the nineteenth century that there was produced nearly everything that can be called by that name. Previous to that time we had indeed the pictures of William Hunt on the walls of the capitol at Albany; and indeed it was at the beginning of that epoch, arbitrarily fixed, that those pictures were destroyed — partly destroyed and partly covered up by the necessary restoration of the building. Again, it was previous to 1885 that LaFarge's paintings in Trinity Church, Boston, were produced, and these at least remain complete. In like manner the paintings in the Church of St. Thomas, New York, were completed before 1880. In either case the subject and the wall space were taken up together, considered together, and treated together, and all this with the result of a decoration certainly appropriate and almost entirely successful as inherently good and well-placed painting. In either case the difficulties of lighting and placing were great; and in either case there were differences of opinion.

The friends of the architect thought they had causes of complaint against the painter, while, on the other hand, the friends of the painter were able to say that his work was so much more important and more

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brilliant than the architectural achievement, the shaping of the interior design, that it was for the world to judge whether any such claim against him might be thought to hold. This, however, is not a fair statement of the case. It is, of course, the business of both artists to help each other, but it must be the builder who takes precedence. The painter has no business to force the interior of the building out of shape by means of its own decorations, great as these may be and much as we may esteem them even beyond the artistical treatment of the interior considered as an architectural composition. The architect may be asked not to hinder the painter, but assuredly the painter must be required not to mar the architect's composition. Another most able mural painter, Elihu Vedder, said in an off-hand speech at a meeting of the Society of Mural Painters not so many years ago that he had this complaint to make of the architects: that when he heard there was a nice piece of wall reserved for him and he came to look at it, he found that the architect had "filled it up with pilasters and things," and had left no free space for the painter to expatiate in. To such a complaint we cannot turn a deaf ear; and yet Mr. Vedder would be the first man to confess that, given the "pilasters," he was the better mural painter who might know how to disguise them, or even to utilize them for his own purposes.

When in January, 1899, there was printed a list of such works then in existence, excluding, because already destroyed, those of the Chicago Exhibition of 1893, it was found that about one hundred separate undertakings, or groups, or achievements in such art existed at that time. Some of these achievements, if that is the best word, included many separate compositions. Thus, one of them included the whole row of lunettes in the Astoria Hotel; another, two great lunettes; another, four walls of a large room. There were also those long corridors in the Congressional Library containing a dozen paintings yet still to be reckoned as but one work of decorative art. Even with that extension of the meaning of the term, "a piece of mural painting," there were found to be a hundred achievements, as has been said; and these were the work of thirty-six different painters. That seemed a fair showing for the work of fifteen years.

And, to speak first of the work of Elihu Vedder, it is noticeable how completely he has created for himself a style based upon firm and hard drawing, positive delineation, exact setting down of bounding lines, whether of the main mass or of the greater detail, direct statement in every case, and no shirking of the asserted fact. Such a style of work

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leads directly to extreme flatness, and to the absence of glow or splendor, in short to the absence of elaboration, whether in the use of color considered as the main purpose of the design or even in the use of light and shade. You are not a great colorist if you are thinking first of the firm detachment of the figure, in all its parts, from the background, and of the complete coördination of every ascertainable and representable fact concerning the play of muscles, and concerning the proportion of limbs to trunk and of trunk to head. Turn over the large plates of Vedder's series of illustrations to Omar Khayyam, and you will see the carrying out of this idea. It is not correct to say that these are not of importance as works of light and shade, because chiaro-oscuro is of many kinds, and a pattern in grays with a very little pure white and but a little more of a positive black can be wrought with hard outlines, a mosaic-like treatment, as well as with subtle gradations; but we are safe in saying that no wealth of chiaro-oscuro is possible in that way.

But although such painting as this will never give that ineffable charm which accompanies the highly wrought light and shade of Rembrandt or the colored gradations of Veronese, it is capable, in the hands of a master, of filling the wall space admirably and of completing the stately wall with absolute fitness. It is capable also, as a convincing example in a private house in New York may show, to those who can visit it, of reduction in scale of treatment "in small" of incrustation as a series of medallions into a general composition of gold or of non-significant mural tinting. Take the case of a magnificent chimney piece, and imagine yourself building the mere enclosure of the fireplace in precious marble of some kind. The chances are that Vedder's simple scheme of color and still more simple plan of light and shade drawing would yield itself better to the rest of your work than would the more subtle manipulations of a greater colorist or of a more devoted master of chiaro-oscuro. All this would seem to point to the eminent fitness of Vedder's designs to mosaic rendering, but for the fact that the one piece of mosaic of his design which is well known, that under the stairs of the Congressional Library, does not seem to be a brilliant success. Who shall say, however, what were the conditions under which this work was carried out?

Consider now a very different class of mural painting, and look at Crowninshield's decorations of the "café" in the Manhattan Hotel, New York. The room is low, large and low; the wall cannot be sixteen feet high anywhere, and half of this surface is covered by a high dado of light-colored wood. Untoward conditions? Perhaps so; but there

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are few awkward straits through which a skilful pilot cannot steer. And this is what Crowninshield, for his part, did with the awkward situation in which he found himself. He took his point of view in the middle of the large, square, low-ceiled room; and from that point he showed the Campagna and the Alban Mountains. On every side, as you look about, the Roman landscape swells away in broad stretches of rolling plain bounded and framed by the steep slopes of the high hills.

Now Crowninshield, who is not a colorist, has yet a singular and most marked power over landscape. He has the gift of making his cliffs rocky, his banks of earth heavy, his hills everlastingly solid. The external world is treated in an abstract way in many of our modern landscapes; there is a great deal more essential fact in them than most landscape photographs can give, because of the omission of the unnecessary facts which harass and confuse the mind of the casual observer. So in the compositions before us: while the abstractness of the treatment is carried farther than would have been the case in an "easel picture" or a water-color drawing of small scale, the character of the landscape is, after all, the same as in those smaller works by this artist. The landscape is singularly real in the true sense; that is to say, the presence of the out-of-door Roman world *extra muros* is strongly suggested; but no one would think himself in the presence of a cyclorama. To one who thinks that landscape has been too much neglected as a means of mural decoration, to one who finds nothing in the work of the great Puvis more admirable than his free and masterly use of landscape in this connection, there is a special charm in this work of Crowninshield's.

LaFarge uses landscape freely in his mural paintings, as, indeed, in his windows; notably in the largest and most important of all the paintings, that of the chancel-end of the Church of the Ascension, New York, it is used with great effect, but chiefly as the background of the figure subjects, and it is consequently slight and suggestive, if considered as landscape-painting. It is not in this way that it should be considered, but as a very essential part of a color-scheme—the mellow and glowing background upon which lighter and higher-keyed passages of color are wrought into a common harmony. Painters find the most serious faults in the composition of this very large wall-painting; but this is largely because they do not much consider the color scheme — what it requires and what it gives. Painters of our day are not much interested in color. When you hold in your hand a worn old Chinese tray of parti-colored enamel, it may be a wonderful mosaic, as fine in line-drawing and subdivision as in hue, while yet a faithful tracing of

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the lines would be a feeble thing indeed. The colors in a pattern furnish only half its color-design. Their relative positions, their relative sizes, the boundaries of each as it fits into all its next neighbors — that is the other half. And, in the reverse way, if you see, or are thinking of, only the *second half*, it is poor and thin. You must let the color also work upon you.

Still, the great Ascension painting is less successful in its separate figures or in the design which controls them all than it is in that setting of landscape. And why? Because in landscape this artist's extraordinary power of color composition — of composition in grave and noble hues treated for and by themselves — has an almost unlimited and unfettered scope. The actual drawing of the figures is not stately, and the whole composition misses something in missing that stateliness; but the color composition is of unsurpassed excellence, and it would seem that the world will wake up, by and by, to the fact that "the first business of a painter is to paint." On the whole, the two lunettes in the Villard-Reid house in Madison Avenue, New York, are the most nearly faultless productions. Each of them fills one end of a large and high dining-room, the ceiling of which is curved in the form of a three-centred or basket handle arch. Each one may be thirty feet long in extreme measurement. The lunette which, owing to the form of the ceiling, contains much more space than a mere segment of a circle would have given, is filled in either case with seated and reclining figures realistically grouped, as indeed befits a piece of work with domestic surroundings of correspondingly simple conception, one of the compositions standing for Music and the other for the Dance.

In a different spirit are conceived those paintings by Edward Simmons which adorn the principal wall of one of the great rooms in a New York court-house building, a recent structure of monumental ugliness. The room is as bare and raw as even a New York court-house should be; and therefore it is out of the question that the decorative fitness of the paintings should be judged. Wisely the artist has not given to these pictures much strength of hue: they have little blue and green, little red; simple gradations in brown and white seeming to form the main part of the composition. Within these limits, however — limits which, as every student of Northern schools of painting knows, are sufficiently large — there is color as well as dignity of composition and masterfulness of individual conception. The two side groups, each consisting of three figures, called, ordinarily, "The Fates," on the left, and "Liberty, Equality, Fraternity" on the right, are oblongs, large enough

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to allow of figures a little more than life size. They are impressive altogether beyond the habit of modern art. The central panel, high and with rounded top, is in a way more perfunctory in design; but it is entirely appropriate, it fills its place well, and it helps the whole composition of this important wall.

The same artist's work in the building of the Library of Congress is somewhat marred by patches of deep red and other hues which are less connected with any possible color composition than are with one another the forms, the light and shade, the larger and the smaller masses of the picture. But if this matter of hues, that is to say, of positive color, were eliminated, as, for instance, if a number of good photographs of the lunettes along that gallery should be examined, it would be seen that the composition is nearly always more architectural than is seen in the New York building, and that for the obvious reason that the strictly limited space, semi-circular in form and closely attached in its very nature to the structure and essence of the building itself, calls for such architectural treatment. If there were a sculptor who had shown himself as skilled in treating architectural problems as Mr. Simmons is in painting, the way to a revival of the lost art of architecture in its more brilliant forms would be visible. In the same building the lunettes filled by Henry Oliver Walker are even more perfectly harmonized with the building, and the use of the nude and the draped figure to fill these spaces is even more remarkable. This is the more noticeable in that only one figure is used for each of the smaller lunettes. It is matter of special note how perfectly each figure is set into its semi-circular frame.

There must be a moment's return to the matter spoken of a few sentences above — the matter of "patches of deep red and other hues." The otherwise eminently and highly decorative work of Pierre Victor Galland is marred by that fault. You enter a room which is adorned by his paintings and it takes some minutes to see anything except here a patch of blue, and there a smaller spot of red, which, after a while, resolve themselves into the semblance of a cloak, a cap, and the like. The notion of a system of color which would render these things undiscoverable until they were sought for, and the particular shade of each garment discoverable only to one who asks the deliberate question about it, seems not to occur to artists who have not become, by nature or by teaching, colorists at least in intention. There is nothing more curious than the reluctance of painters to paint, and to make the act of painting — of giving the colored look of things, as LaFarge has said — their principal task and to consider it their highest achievement.

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It is in this respect that Mr. Edwin A. Abbey's immense series of paintings in the Boston Public Library fall short of excellence in a serious way. In no respect are they exclusively wall paintings: they are eminently, in their character, small pictures greatly enlarged. The unanimous voice of those painters who in a guarded way speak of their brother-artist's work is that these scenes have not been looked at with a painter's eye, nor has the embodiment of them upon the wall been wrought out with a painter's touch. It is, however, in this matter of spotty and unrelated color that they are the least attractive; and, of course, the quasi-impossibility of overcoming this defect in work not primarily a colorist's, unless the whole development is considered, conceived, and developed in and upon the actual wall spaces which are to receive it, must be fairly evident to all observers. These pictures, painted in another land and under other skies, exhibited for a while like easel pictures on the walls of a top-lighted gallery in New York, and then put up in place in a low-browed, side-lighted room, are found to have suffered from those untoward conditions in just the way in which they would be sure to suffer.

On the other hand, there are some smaller and more portable paintings in which the great character of work prepared for mural decoration may be predicated. Thus, Mr. Thayer keeps his work so well together and composes in so masterful a way, with so seemingly restrained, but really strong and unfailing, a method, that one longs to add a little glow, a little mellowness of color, and then to expand and extend these compositions to cover great surfaces of wall in our public buildings. There is this to be said in defence of the reasonableness of such a dream — that the peculiar massiveness and physical dignity of the drawing of single figures and of the juxtaposition of different figures of different outlines, different external characteristics, different aspects, both human and artistic, would lead directly to the most monumental of wall decorations if that opportunity were offered.

In this Mr. Sargent also would stand at the front were he to relinquish portrait painting, in part, to produce more permanent, and, above all, more widely interesting works. His paintings in the Boston Public Library are not well placed, filling as they do the end of a gloomy corridor from which the light of day seems to have been excluded with a purpose. They are puzzling in so far that their significance cannot be seized at a moment's notice, but needs a prodigious amount of reading of printed guides and the like; suggesting, as they do, the whole tangle of religious belief leading to superstition as it has existed, in changing

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forms, since the beginning of civilization. Still, it is so extremely impressive as decoration that one who is looking not so much for one more explanation of mortal dreams of the immortal as for splendor and physical beauty will remain fascinated, and will persist in the analysis of the work until its whole artistic meaning shall reveal itself. And yet, in the crowded hollow of the vault above, as in the frieze, filled with its stately figures and grandly composed masses of drapery, there is room for that glory of color with which one might well desire to see it all invested; it being accepted as a fact that painters will seldom try to paint but are always striving to model, to compose, to organize, and to be sculptors in the flat. Let that be admitted and we have still to demand that those painters who undertake the adornment of our great wall surfaces should try to grasp, for the nonce, the essential necessity of color harmonies, elaborately combined into what one is almost tempted to call a color melody.

One of the ways in which this difficulty is turned by those artists who do not choose to meet it is by using a very high key, and so allowing all the hues and tints to pass into a high, nearly white light, in which gradations are extremely slight and pale; this gradation in its delicacy seeming to take the place of the stronger harmonies of color which, though not present, will not be missed. Mr. Blashfield's most important work is sometimes of this character; and, as in the ceiling of the Huntington house in New York, so little known but so well deserving to be known, the lovely design detaches itself little by little from what has seemed for a moment an almost uncolored ceiling. It is the ceiling of a comparatively low room, that is to say, a drawing-room of moderate size and with the height proportionate to its other dimensions. This painting, not far above the eye, swims into sight emerging not from a haze, but as it were from nothing.

The circle of figures arranged around the oculus of the dome in the Congressional Library may be considered as the most striking piece of work that he has done. In this the architectural distribution is everything. The figures are almost detached from one another, and form a ring broad in proportion to its inner diameter and filled up so that it may be said to be entirely composed of twelve great figures painted flat. There is nothing to be seen more masterly than the abstract handling which has made it artistically possible to alternate a nearly nude "Egypt," seated and facing the spectator directly so that the thighs are foreshortened to nothing, with a fully draped ideal male figure on one side, a female figure on the other side, also fully draped, and at a very

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short distance a "German" in coat and breeches and soft cap — a seeming portrait of a Teutonic master of thought.

A certain remote allusion to significance of another kind than that of the painter's special work may even be thought to add interest to this important composition. The thought of the personified "Middle Ages" as profoundly and sadly self-centred; disregarding her attributes, her cross-handle sword, her triple crown, and the Gothic cathedral upon which she leans — and looking hopelessly into space; while the symbolical figure of "Italy," equally grave, equally immersed in thought, is still seen to be in the dream of artistic composition, and therefore not hopeless, not even questioning, but waiting merely until the inspiration comes — all that is as it should be. We want our wall paintings of great pretensions and great skill to be tranquil, to have figures simply posed, and, as it were, incapable of rapid or hasty movement; and if to such figures the suggestion of human thought may be given, the force of the composition is greatly increased.

In this connection a word must be said of the ceilings by Will H. Low, which are painted in the most direct and simple way as if they were wall paintings hoisted into horizontal position. To one who is thinking of painting rather than of architectural adornment, ceilings do not afford a proper place for his art, that is, for representative and expressional painting. Let the students who have spent hours lying on their backs in the halls of the Ducal Palace, patiently studying out the compositions above their heads, answer the question whether the great Paul Veronese is at its best if put flat, facing downwards, and to be seen only by the upward-turning eye. If a ceiling is to be painted, then for heaven's sake let the absurd mockery of perspective be abandoned. Nothing is more amusing, in a way, than to analyze one of those Venetian compositions and see how little the very obvious tricks of perspective are allowed to do, how little is made of them in the composition. The parapet and the imaginary opening in the roof which this parapet surrounds will be found in elaborate perspective, drawn as seen from below. Over that parapet there peep two or three figures who are also carefully foreshortened with most perfect, most consummate skill, and with what seems almost to be scientific knowledge to control their apparent movement. You will also see that this is all mere device to catch attention and to please the hasty observer, and that all the composition outside of, and beyond, this is treated exactly as if it had been a "mural" painting in the strictest sense of that word.

So Mr. Low, in the well-known oval which fills the ceiling of the

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reception room in the Waldorf Hotel, and in the perhaps still finer composition which fills a great circular panel in a Fifth Avenue house, has shown how suitably domestic interiors can be treated without any narration, any story-telling, any very marked appeal to sentiment other than that which is wholly artistic. The one is called "Homage to Woman," where a nude Venus is greeted by choirs of harping and singing men and women, while the air is full of doves flying disturbedly as if frightened by the dithyramb; the other is "Golden Autumn," or a harvest scene, if you please. In each, however, the question is merely that of lovely figures poised in those delicate cloudings of color which mean the clouds of heaven in the one place and in the other the stubble field with the sky above it and a shower which falls from the winnowing sieve to fill the middle distance. Mr. Low is an artist who, in a very marked way, rises to his occasions; and you cannot see his work aright unless you see it on a large scale.

It is in the matter of mural painting that one finds most satisfaction; and yet it is to be admitted that very much of the best work which has been done in the modern world is in the smaller form, for instance in easel pictures, or even in still smaller water-color drawings. There is even a certain disposition among artists belonging in fact or in spirit to the "old school" to regret the time which they or others spend upon mural decorations. The oblong of canvas three feet by four or four feet by five is, after all, that which they are accustomed to handle and to respect the most. One wonders sometimes what a master of great technical skill belonging to a time before mural painting had begun again in the nineteenth century to excite the interest of artists — what Gainsborough, or Troyon, or, for water-color painting, Turner — would have done with a sudden demand for a picture twenty feet long fixed immovably upon a wall. The sculptor will tell you that if you model a statue admirably well and then have it increased by mechanical means to a colossal size, you will have created a monster. In like manner, it is in daily evidence that the statuette which is reduced from a life-size statue is far from being a success. There is many a statue, by the way, which had better have been a statuette: that also the student feels, and that fact confirms these statements.

So, in the matter of painting, if you take a Homer Martin and extend it from three feet in length to thirty feet, it will take another touch and another manipulation — I was about to say another way of looking at nature — than his, to produce a noble effect. Here is a picture, for instance, which Martin in his prime produced in the follow-

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ing way. He "booked" one day a clump of three trees which were very different in character from one another, and extremely unsymmetrical; a strikingly unusual, natural group. He noticed, too, and memorized on a leaf of his sketch-book, the fact that the ground where they stood was the last on a rather high plain, and that immediately beyond them the ground dipped rapidly, so that the trees as he saw them came against the sky without other background, although they were looked at from their own level. Months afterward he put those trees into the middle of a canvas, and preserved the unbroken background of cloudy sky; he then began to add to these primary features what else the composition seemed to him to need. On one side of the clump of trees he filled in large, cloudy masses of lower vegetation; on the other, he left an open sky broken by a low scraggy flat top growth like an old-fashioned apple-tree; and in the near foreground he put in a smooth, still pool of water, in which parts of the sky, of the bare tree, and of the thickly foliaged trees are reflected. To that true eye and that practised hand the swift sketching-in of this composition required perhaps half an hour of concentrated thought, and that sketching-in would not need to be altered. Then came, however, the painting, and that was treated with as single-minded a purpose as if the artist had been trying to be "true" to nature in the Ruskinian or non-artistic way. He was trying, of course, to be true to his mission as a painter of unusual powers of composition and of sufficient technical skill for his purpose — "an oil painter if there ever was one," as John Fraser said of him; and the unpretending little composition is "large" in the sense in which that word is used for literary as well as for artistic criticism, but by no means fit for enlargement to fill a wall-space.

Or, take Martin's better known painting, "High Tide at Villerville." The scene is merely a flat, salt marsh with creeks or bayous of still water, the whole dominated by a low firmament of gray clouds, thick and dense, and showing no blue sky through their interstices, but yet a luminous firmament, gray clouds pouring out light. Was that thought consciously conceived and deliberately expanded into this painting? Or was it unconsciously added to the foreground with its complicated network of water-ways, because a sky was needed there, the whole design built up in memory of a single gray day upon the marshes? Here, again, it was a three-foot picture which alone was conceivable as the artistic result.

More striking and more brilliant than these are the works of George Inness. They more often glow with sunset color or blaze with light

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produced by strong and well managed contrasts, but they are not on that account better than the more subdued and graver work of Martin. An exhibition, such as was held in 1891, of the works of those two masters, many of their canvases being shown together, is certainly one of the most valuable opportunities for a study of art that can be afforded.

And let both of them be contrasted in your appreciation with the landscape work of Winslow Homer, a man who is not primarily a landscape painter but who takes to landscape because, I think, the out-of-door life which he has loved to depict brings landscape with it as a matter of course. You cannot have your fishermen, your sailors, your campaigning soldiers, in the vigorous action which Homer loves and which he alone can draw as it should be drawn, with an indoor background, or hardly with a background of city buildings. The Maine woods, the Maine shore, the blue water of New Providence Harbor, or, in his older pictures, the sweep of New England pasture-land — these furnish the backgrounds which his moving figures require. Nor would any one say that in landscape Mr. Homer's achievement was a triumphant success. It is hardly final and complete. It suggests rather the comparative indifference of the man who is thinking of other things than the composing of perfect color designs made up of details and ideas which out-of-door nature has furnished to him. Those words may pass as a definition of landscape painting, and it is not in that way that one is to take the work of Homer except in certain unelaborated studies, little drawings in vigorous color which are sometimes of extraordinary value and charm.

But Homer has the gift, which is but rarely given to mankind, of drawing a figure so that it seems to be in motion. His girl whose hat is about to blow off slaps it down upon her head with a vigorous action visible through the loose bodice and the looser sleeve: his mower, hard at work with his back to you, is seen to be in the act of making a sweep with his scythe, in fact, the sweep is half made and the point is coming round toward the spectator along the left side of the workman with what might be thought an audible whistle as it cuts the hollow stems. The fine old salt in the painting known as "All's Well" is distinctly seen to be in the act of giving his long-drawn cry, heard all along the decks, "eight bells and all's well!"

It has seemed interesting to combine, àpropos of Winslow Homer's wonderful work, the consideration of figure work with landscape, because it is landscape as modified by human action that interests the artist the

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most, at least in recent times, and it is the human figure in action and out-of-doors which again interests the artist the most. There are landscape paintings in which no figure appears and in which there is still a visible sense of man's presence, or at least of man's feeling of close intimacy with the landscape which surrounds him. The combination of landscape and figures would, however, be a thing to deprecate, but for Homer's surprising gift at abstract composition. He is the equal of any living man in the matter of combining his significant and constructional lines so that they shall be lovely in themselves: and this is a subject which it would take pages to treat aright, and which, as it happens, a brother painter of Homer's is in the way of considering fully. Unless one has this rare gift, he must be "treesy" or "breezy," or touch in some way the love of wild nature common to those "in city pent": but landscape as a great fine art requires a power of composition equal to that of the strong figure painter.

Unquestionably, it is in landscape that American artists are the strongest. Think of the monumental composition of Alexander Harrison's "Sunset," with the stretch of peaceful sea marrying itself to the smooth beach with wonderful, indescribable curves of thin-edged foam; a rocky point closing the nearer scene and allowing the distant echo, or repetition of it, to come slightly into view. But this would have been the same beach and the same waves had no white man crossed the ocean: it is interesting to consider nature as existing in older and crowded lands, and to ask of them for human sympathy.

This seems to exist to a marked degree in the landscape painting of John LaFarge. The fairly well known Paradise Valley, the green Newport landscape as it has sometimes been called, with the calf in the middle plane, is one instance of this. Those astonishing views across the Valley of Tokio, small water-color drawings in which the same scene taken from the same point of view is represented in four different aspects of haze and mist and daylight and sunset, and the monochrome pictures brought from Japan, the avenue of cryptomerias and the dry bed of the Dayagawa River, are instances of this. Studying these, one would think LaFarge to be an artist altogether identified with the world "as modified by human action"; and it would have been hard ten years ago to have imagined his painting anything comparable to the Fingal's Cave, or Mr. Vanderbilt's Ostend, or any other of the mist paintings of J. M. W. Turner. He brought back, however, from the Pacific islands paintings of mist and cloud and rolling masses of vapor which are perhaps of all his works those that are most cherished by their creator. It

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is a welcome discovery that the French-taught man, or at least the man of French traditions in art, can expand his own particular garden of art to include that which certainly has never been a part of the French enclosure. The painting of mist and cloud and fog has always seemed, to those whom Turner has taught, one of the most important and most neglected parts of the artistic repertoire. One who has spent long months together on mountain tops, and has felt that here alone can cloud formation and cloud masses be studied, will look even at the greatest landscapes of Turner with the feeling that something more can be done in that direction. Now comes LaFarge, who in later years has given a foretaste of what may, perhaps, be experienced, felt, and shown the world by painters of a generation to come.

The fact that he did this in water-color and on a very small scale has, in a way, left the field open to the oil painter who shall try to do the same work. Homer Martin could have done it had he turned his attention that way. Inness achieved it in part; he treated mist and cloud so far as they could serve as a curtain upon which the colored light of the sunset could be strongly thrown. The relation, moreover, between the actual painting of cloud and mist and the treating of landscape in its more usual forms, tree and rock and hillside as reducible to cloudy entities as was brought about by Corot in his paintings, has also a future before it. The student of modern landscape cannot but suppose that an art as original as Corot's could be based upon noon-day light and distinct massing of tree-forms in combination with the solid masses of earth in a way comparable to the actual view of nature taken by a near-sighted man of imaginative character. The main peculiarity of ordinary myopia in the view which it allows its victim to take of nature is that nothing is sharp-edged or clear-cut, and that the near-sighted man sees the landscape more harmoniously composed, more unified, than his friend with normal sight.

Some effect equivalent to this was sought by those Englishmen who painted great stretches of country, wide reaches of landscape, an estuary with both its banks visible, the farther one in distinct contrast to the easily seen details of the nearer shore, or a mountain valley seen lengthwise as in the "Ben Arthur," or as one might paint the White Mountain Notch from the hill which overlooks the old Crawford House. Constable revelled in these effects, so, of course, did the great Turner; but Turner struggled with other landscape effects as well, and tried to realize what his too enthusiastic admirers have claimed for him — an equal view of nature in all her forms, all her manifestations.

This direction of landscape art seems to have been abandoned in

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recent times, and that chiefly because of the influence of the Barbizon School, with its study of foreground, of individual trees, of vistas closed at two hundred yards from the eye. Peter Paul Duggan, in lecturing to his pupils long before the Civil War, let us say in 1855, was already pointing out to them the peculiarity of this school, then considered a school of come-outers, that they found nature and their artistic subject in the corner of a field with a single tree and a stone wall or broken rock near it. It was noticeable then how much of a surprise was this dictum to those painters of our old Hudson River school who heard of this as coming from Duggan, and charged him with exaggeration when they foregathered in the Century Club. There is a limit to it. The landscape from the top of Mount Washington may not be very effective, while the landscape from Mount Mansfield, twenty-five hundred feet lower, may be of immense utility to one who will study it, if we remember that the landscape is *always* framed and set in cloud, in our north-temperate regions. You may spend six weeks on the top of a four-thousand foot mountain and never once see the sun rise, or set, with the hills clear-cut against his disk. If you want simply modelled hill and valley, you must go to tropical regions, or to your brain and heart for them. Northern nature will give you merely a hazy effect of distance and of space.

All these considerations are urged here merely to emphasize this fact, that our landscape of the last thirty years has been a very human landscape indeed. The love of wild nature, or of nature so vast and seen in such great masses that human influence hardly seems to affect it, has gone out of fashion; but there is no reason to doubt that it will come into fashion again. It is noticeable, however, that of the men already named as landscape painters, the one who is the least exclusively a landscape painter, and who by his gifts as well as by his physical handicap is the least presumably ready to be interested by "wide landscape," as the studio talk has it, should have been the man to paint these mountain valleys or to show Marlinspike Mountain through ten miles of tropical haze — the steam of virgin forest in a moist climate and under the equatorial sun. LaFarge's best known works — best known, at least, to persons living far from urban centres of art study — are small and delicately wrought drawings of blossoms and foreground leafage; for the remarkable series of studies in Japan and in the South Sea Islands have, it is probable, obtained but little favor from the picture-buying public at large. The known conditions of the work done upon these foreground drawings, contrasted with the untoward circumstances

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under which the great landscapes were produced, great landscapes though small in extent, afford the readiest means, to any one who will observe, for a sufficient judgment of the old doctrine, too long accepted by the world, that landscape painting means portraiture of nature.

This question of direct portraiture, of direct representation of a good natural scene, brings up the most novel of all questions concerning the painting of external nature. The difficulty of using the English language to explain aright the conditions of fine art is never better seen than when there is discussion of Impressionism in the recently adopted sense. One excellent and critically minded writer speaks of it as being such a study of nature as that its productions seem windows opened in a wall. He compares it deliberately, for its value to us, with such a window and the landscape seen through it. On the other hand, the work of the Frenchmen who called themselves *pleinairistes* rather than *impressionistes* seems to me as far removed from direct copying of nature in the ordinary sense as can well be imagined. The painter does, indeed, study nature closely, and study out of doors too. He has a feeling, probably, that without such study he would never become so filled with the strength and glory of sunlighted color, or of color as modified by the cold light of the sky mingling with the warm light of the sun, that he could paint in the spirit of his own meditations and reproduce in part his own mental conceptions.

To assert that a fine impressionist picture looks like a natural scene, or is intended to look like a natural scene, is to state a paradox. Here is a still meadow with spindling poplars and a slow-moving, almost unruffled stream, and there is evidently deep soft grass on either side, and the limited range of vision is bounded by a wall of low hills. A very few cattle are knee-deep in the herbage. Those are the ponderable facts. But the artistic fact is that all this is invested with a colored light which does not exist for the ordinary looker at fields and hills and cows. What that light is depends entirely upon the mood of mind of the painter, which mood may have been superinduced by the temporary aspect of the place under a given sunset light, or by the recollection of what it was yesterday, or by the recollection of a light seen upon another field far away, or upon all these influences taken together.

What is sought, then, is truth of nature in the matter of light and shadow, and these not in their once accepted black and white, or rather gray and white, aspect, as if the landscape were seen in a "Claude Lorrain glass," but in an atmosphere composed of color which wraps every object in changing envelopes of subtle gradation. The picture will not

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be a portrait of a single scene, as if taken at the momentary falling of a curtain, or as chronicling the passing of a cloud. It is far more apt to be the work of him who says, "Nature has this way of showing herself in the afternoons, here on these Norman plains; perhaps I can seize it better to-day than on another day." He tries. Partly failing, he tries it on another occasion. In his mind somewhere there is an effect which he certainly could not express in words, and finds that he can hardly express in colors and on canvas; but, as he continues to try for it, he produces this and that painting which the unprejudiced world of picture-lovers will welcome eagerly.

The full study of impressionism has not been carried far in America; Mr. Julian Alden Weir alone showing a profound care for its development. It is evident, however, that each one of the landscape painters who has a name to-day differs in his work from the less intelligent work of fifty years ago in his approach to impressionism. What differentiated a representative picture of the Hudson River school from a picture by, for instance, Constable, so much as the investing of the external forms of nature with a light that was not natural, while the Americans, having far less grasp of nature, tried the harder to paint her precise aspect at a given time. The most original of all those Americans, dated cursorily, as above, "fifty years ago," was Jervis McEntee; and his studies of autumn woods were calculated to please the believers in minute reproduction as well as the students of what had not been called at that time "Impressionism." So Childe Hassam's great gift of seeing the fresh and pleasant colors in external nature is shown in studies of seashore and confused foam as well as in studies of winter dulness in town. His gift of sight is that of the truest devotee of the open air — if we must translate the French term. So Horatio Walker, who seems to many of us a really imaginative landscape painter, has assuredly a marvellous sense of the flat open country, and can put figures into his landscape in a way that reminds the lovers of Jean François Millet of their great favorite. So Daniel Ridgeway Knight makes almost a genre picture out of a foreground landscape, and that without loss of dignity. So Alexander Wyant's work, like Martin's, is "Nature seen through a Temperament," and treated as only a very skilful designer in form could treat nature. So the paintings of D. W. Tryon are studies of the abstract — of the charm and playfulness, or of the dignity and sombre aspect, of nature, and assuredly are not portraits of individual scenes. So Henry Van der Weyden paints strong and grave landscapes nobly composed, every one a memory mixed with a thought.

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There is no lack of thoughtful and permanently valuable painting among the artists of the United States. There is enough of it to supply all demands. The demand is, if you will have it so, insufficient. So huge a community ought to demand more painting, more of every noble and comforting art: it ought to encourage every relief to the monotony, every inspiration, and every spiritual joy. In other words, it will be thought, by most of us who think at all, that the community is a small one when looked at from the standpoint of intelligence. It is a little country, perhaps as big as Holland, when we talk of intellectual pursuits and intellectual pleasures, but a great nation in its external aspect and, notably, in the aspirations of its youth. Hence it is that the art schools have within the last ten years sent forth into the community one hundred times as many persons who would like to be artists as there is any room for. And the worst of it is that a certain percentage of these aspirants toward a goal which is out of their reach are potential artists. For them it may not always be worse than for their fellows who could never be artists; but for the community it is sad enough that these art students who have the divine gift, in some measure, should be hidden from our sight by the crowd of the incompetent.

This is one reason, among many, why mural painting should be insisted on and kept to the front as the true graphic art. It is well to set the pace at once, so that none but the potential winners shall be entered in the race. Well-intentioned and ambitious inferiority, looking at a water-color of "Flowers" or "Still life," thinks well of its own chances of doing that much; but it may stand in awe of figure painting on a great scale and evidently sufficient for its place, and may hesitate before going farther toward a probable failure.

RUSSELL STURGIS.

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THE EDUCATIONAL OUTLOOK.

MR. BALFOUR'S vexatious Education Bill has been passed at last by the British Parliament. It is battle-scarred, to be sure, with many emendations, additions, and amendments, after the struggle it had to go through to preserve itself in some shape. After all, the comfortable middle class cannot bear the thought of depriving the national church of too many of the prerogatives with which tradition has endowed it. Mr. Joseph Chamberlain, who certainly knows well what are the real feelings of the Britisher's heart, has declared that, rightly or wrongly, the majority of the nation believe in the preservation of religious instruction in the schools. And he is probably right.

With us, in America, the separation of church and state is so thoroughly an article of the national creed that it appears strange to many why a common-school system like ours should fail of unanimous appreciation by our English cousins. Yet, on the deeper question involved there is some decided division of opinion even with us. For the present, the discussion is chiefly turning about the question of the use of the Bible in the schools. As already stated in a former article, the National Educational Association, representing something like ten thousand educators, placed itself on record as favoring the reading of the Bible in the public schools as "literature." The New England Association of School Superintendents, giving expression to the convictions of the teachers in the Eastern States, last month endorsed "the reading of the Bible, without comments, in every public school in the land." The President of Amherst College, in arguing the question before this association, said that a clear distinction should be made between the judicious study of the Bible as literature and the interpretation of its theological teachings, which latter he considered unquestionably out of place in schools maintained by public taxation.

Meanwhile, the Supreme Court of Nebraska has handed down a decision declaring that the reading and studying of the Bible, the singing of hymns, and the reciting of prayers in the public schools are religious and sectarian exercises, and contrary to the constitution of the State.

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The one thing about which there seems to be no substantial disagreement is the need of some sort of definite and systematic moral instruction and training in every school, from the kindergarten through the college. This was demonstrated again in the discussions of President Eliot's recent public utterances.

As the head of Harvard University and president of the National Educational Association, Dr. Eliot was regarded in a measure as voicing the opinions shared by the leaders of American education. Unfortunately, the newspapers selected from his discourses only what seemed to give a pessimistic interpretation to the results of popular education. His efforts to modify expressions of apparently hopeless views by dicta of a more cheerful coloring failed to pass the ordeal of editorial censorship; and the space his more conciliatory words might have occupied in the newspapers was assigned to items of a more exciting character. No wonder Mr. Dooley and the great newspaper public concluded that university presidencies and high educational honors tend to make the possessor melancholy and unwilling to look at the world in any other way than with "fears iv approachin' danger." Few people outside of the educational field were given the opportunity of knowing that the widely and prominently heralded enumeration of what President Eliot was pleased to call "grievous failures of the public-school education," in his address before the Connecticut State Teachers' Association, was followed by a description, before the New Hampshire teachers, of successes at which the schools may justly rejoice. And the closing address of his tripartite review of public education in America, before the Rhode Island Institute of Instruction, containing nothing sensational, received even less attention. If editorial comments upon President Eliot's utterances had been delayed until after the close of the Providence address, and the three parts had been taken as a whole, there would have been saved at least a hope for general and temperate examination of the important questions raised to the surface for the thoughtful consideration of friends of education.

The generously advertised Connecticut address was intended to stir the consciences of teachers and the general public to a recognition of the need of greater devotion to the improvement of the agencies for the instruction and training of the young. President Eliot's message to the teachers was that the schools must be made "more effective to all righteous ends." His exhortation to the taxpayers suggested that the greater effectiveness of the school unquestionably means greater costli-

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ness. "Could anybody imagine it to be unreasonable," he asked, "to spend for the mental and moral training of the child as much as is spent on his food?" This somewhat peculiar standard of expense, which would certainly leave some of the poor children in our large cities with an even less adequate education than they are now obtaining, he characteristically modified by a more acceptable statement to the effect that "if that equality in expenditure could be established all over the Union, there would result a prodigious improvement in the schools." It certainly would speak well for the country if the sum total expended for the mental and moral training of the young could be made equal to that for their food and general physical care, providing the end was not accomplished by curtailing the expense for the latter.

The particular shortcomings which President Eliot complains of, "our disappointments with popular education," are all selected from the panorama of public adult life in America. He very ingeniously fixes the whole responsibility for most of the causes of his moral and intellectual grievances upon a lack of reasoning power on the part of the majority of the people; thereby projecting the inference that, if the schools had exercised greater care in training this reasoning power, the state of American civilization would be more uniformly satisfactory. The first two "disappointments" which he thinks ought to be remedied by improvement in the training of the reasoning power are the unsuccessful struggle with "the barbarous vice of drunkenness" and the "persistence of gambling," which latter he considers "an extraordinarily unintelligent form of pleasurable excitement." Yet Dr. Eliot has been called pessimistic for expressing this optimistic belief in the efficacy of the cultivation of the intellect as the method for annihilating drunkenness and gambling.

It may be true that "the nature of the daily reading matter supplied to the American public affords much ground for discouragement in regard to the results thus far obtained by the common schools." To be sure, one invaluable result of education ought to be a taste for good reading; and it is probably equally obvious that the purchase by the people of "thousands of tons of ephemeral reading matter which is not good in either form or substance" must be galling to a scholarly university president. Some people may have the hardihood to rejoice that the population is sufficiently wide-awake to consume such enormous quantities of reading matter. Not having any statistics at hand, they seem to be comforting themselves with the delusion, if delusion it be, that the amount of good reading is to-day far greater, comparatively speak-

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ing, than the ratio of some fifty or more years since, when the Sunday-school library and ladies' boudoir sillinesses formed the sore grievance of the paternal friends of the people. Happy in the thought, these thoughtless optimists are prone to look at the present amateurishness of the plain people in matters touching the choice of reading matter as rather an encouraging promise for the future. President Eliot takes a different view, and he may not be altogether wrong.

The things in the Providence address about which there ought to be no disagreement were the arguments in favor of increased financial support for the common school for the perfection of the sanitary and æsthetic conditions, for better teachers and expert superintendents, for the gradual increase of the proportion of male teachers, and for the lessening of the number of pupils to a teacher. President Eliot's insistence that retiring allowances for teachers ought to form an indispensable feature of every public-school system may not be readily assented to by every taxpayer; but that does not invalidate the position taken. A school system that does not permit of the pensioning of partially disabled, faithful teachers is certainly uneconomic, though the establishment of annuities may involve increased expenditure. The most telling plea brought forward by President Eliot was that in favor of expert school supervision. The importance of having a good superintendent of schools is beginning to be more clearly believed in as the years go on. Amateur supervision is responsible for many of the defects to be found in the common schools. An expert superintendent will, of course, demand a higher salary than a dilettante; but the money paid him represents a wise investment, while every dollar given to the latter can hardly be considered more than an unwise charity practised at the expense of the taxpayers and the school children.

The reception of President Eliot's remarks by the newspaper world illustrated an w the readiness, amounting almost to recklessness, with which everything reprehensible in national life is charged to the schools. The prevalence of crime, indifference or hostility to the churches, irreverence to parents, gambling, increase of the liquor traffic, and what not — all these figure among the grievances for which the schools are held responsible. If these complaints could be accepted as evidences of a strong faith in the power of the schools and a sorrow that the expectations have not been fully realized, teachers might have reason to be regretfully proud of them. But, as a matter of fact, the charges represent frequently merely a human weakness in fixing the responsibility for the shortcomings of civilization at some place most convenient and at the

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same time defensible by reasonable argument. When it comes to a distribution of praise for the good there is in the world, the credit assigned to the schools is usually less liberal; though President Eliot, for one, took pains to enumerate a number of American achievements whose development he believed to have been due to the influence of the schools.

Rightly or wrongly, the schools, especially the common schools, are held to account for whatever is awry in civilization, whether this is due to a weak moral sense or to lack of intelligent reasoning in the mass of the people. Reformers are regarding the schools with growing faith in their power to shape the future of the nation. At the recent State convention of New York police chiefs, at Elmira, the spreading feeling expressed itself in the suggestion by Chief Moore to the effect that the criminal court of the State should be introduced as a study in the public schools.

The teachers would be more pleased with the growing regard of the public for the importance of the schools if their pay were correspondingly increased. The salaries, however, though somewhat larger than in former years, are not yet very tangible proof of the taxpayers' belief in the teachers as the chief wardens of the highest treasures of civilization. In Chicago, the school authorities have shown themselves to be particularly sceptical. First, they refused to honor the new salary schedule granted to the teachers after an organized fight, on the ground that there was not money enough to meet the new demands. After a plucky campaign in bringing to terms some of the tax-dodging corporations of Chicago, and putting the city in possession of over a million dollars which would never have gone into its treasury, the teachers felt that there was no longer any excuse for withholding from them their just due. But they had to see the money they had collected for the city promptly diverted to other purposes. The city officials were evidently determined not to pay the just debts on teachers' salaries. Still greater disrespect was shown when the teachers were deprived of one day's pay for the legal suspension of work on Labor Day. Is it any wonder that the splendidly organized Chicago Teachers' Federation was driven to an alliance with the Chicago Federation of Labor?

There has been much discussion of this move of the teachers. The joining hands with the labor unions is naturally displeasing to many. Yet under the circumstances, the teachers cannot well be blamed. The irritations to which they had been subjected for nearly three years

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could be no longer endured. With the something like two hundred thousand votes back of them, which their affiliation with the federation of labor assures to the teachers, the deafness of the politicians will be speedily remedied and a favorable hearing secured. Newspaper bugaboos make it appear that the teachers are now amenable to the edicts and methods of unionism, and that they may be ordered out on a strike as a means of enforcing demands and redressing grievances. But these things need not be taken too seriously. Under the rules of the Chicago Federation of Labor, each union is left to decide for itself whether or not to join in a strike; and there is no probability that the Chicago Teachers' Federation will ever resort to pernicious methods.

Next to President Eliot, President Roosevelt has supplied the greatest number of topics for educational discussion in recent weeks. With characteristic vigor and practical incisiveness, the chief executive of the nation has thrown into bold relief a few problems that are not usually receiving the attention their importance ought to command. Among these is the much debated question of the best system of education for the Indian. In his message to Congress, Mr. Roosevelt makes these recommendations:

> In dealing with the Indians our aim should be their ultimate absorption into the body of our people. . . . The large Indian schools situated remote from any Indian reservation do a special and peculiar work of great importance. But, excellent though these are, an immense amount of additional work must be done on the reservations themselves among the old, and above all among the young, Indians.
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> The first and most important step toward the absorption of the Indian is to teach him to earn his living; yet it is not necessarily to be assumed that in each community all Indians must become either tillers of the soil or stock raisers. Their industries may properly be diversified, and those who show special desire or adaptability for industrial or even commercial pursuits should be encouraged so far as practicable to follow out each his own bent.
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> Every effort should be made to develop the Indian along the lines of natural aptitude, and to encourage the existing native industries peculiar to certain tribes, such as the various kinds of basket weaving, canoe building, smith work, and blanket work. Above all, the Indian boys and girls should be given confident command of colloquial English, and should ordinarily be prepared for a vigorous struggle with the conditions under which their people live, rather than for immediate absorption into some more highly developed community.

The experience of the nation in directing the school education of the Indian might be made to yield some valuable hints for the management of the educational work in the Philippines. But, as usual, experiment is given the right of way. As a result, no end of trouble and sore annoyance have accompanied the efforts for extending American

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civilization through the Pacific archipelago. It may be that the recent promotion of Dr. Elmer B. Bryan to the position of general superintendent of education will put an end to some of the obstructions that have so seriously interfered with the development of the Philippine school system. Dr. Bryan has demonstrated considerable ability in getting the training of teachers under way in the isles and is popular both with the Filipinos and their teachers. The division superintendents are also in thorough sympathy with him, and stand ready to coöperate and advise with him. These things, of course, do not establish fitness to organize, develop, and strengthen a system of public education under the trying and complicated conditions existing in the Philippines. But they do give some assurance of harmonious coöperation; and that is as essential to success as experience, perhaps more so.

The charges made against the educational department in the Philippines have been thoroughly investigated. Complaints were published to the effect that the authorities were in absolute ignorance of conditions in the provinces when assigning teachers; that promises of the full privileges of the military commissary had been disregarded; and that the Government had broken faith by paying salaries in local currency instead of gold. The results of the investigation have been indorsed by Governor Taft, who writes:

> I have not the slightest doubt that a number of teachers in the Philippine Islands have been subjected to hardships which might reasonably cause complaint. It is inevitable that, when coming into a new and undeveloped country like this, even though the teacher carries much of the missionary spirit with him, unless he is unusually optimistic in his nature, he should find much in the first six months to complain of. It was inevitable, too, in the organization of such a large system as the educational system of these islands, that there would be defects bearing hardly on the teachers which only time could cure. The difficulties about the currency have been met, but the rapid fall of silver was something that could not be anticipated, and which it took time to make provision to meet. All the civilian employees, as well as the members of the Commission, have suffered by this fall.
>
> I am quite sure from some investigations that the teachers have become much more reconciled to their situation than they were before, and that the civil commissary is doing much better work. Patience is needed on the part of everyone while the injustices, inequalities, and other defects are being remedied.

The educational development of the South is making gratifying progress, though the leaders of it seem to confine their sympathies too much to a few localities. A departure of much promise is that announced by the University of Tennessee, whose far-sighted president has planned the establishment of a department of education in connection with the university, to begin January 6, 1903. The admission

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requirements are to be the same as those to other departments of the institution. Teachers, and those pledging themselves to teach, are to receive free tuition. The course, which is modelled after that of the Teachers' College of Columbia University, is calculated to meet the needs of the South for an advanced school for the professional training of teachers.

North Carolina is, perhaps, the most active Southern State in public educational pioneering. The election last month of State Superintendent Joyner assures a continuance of the endeavors for increasing the efficiency of the common schools. An especially interesting work is planned in the form of a winter school of agriculture, at Raleigh, for the benefit of farmers and farmer boys. Only subjects of practical interest and economic value on the farm are included in the course of instruction, which is to cover ten weeks.

Speaking of agricultural instruction, a word ought to be added concerning the service rendered by the national Department of Agriculture. Aside from the great help given by the dissemination of scientific methods of farming, and the application of successful experience to the "one-man farm," especially in the South, incalculable good is done. The aims with reference to the rural common schools are suggested in the year-book of the department by Dr. A. C. True, the director of the office of experiment stations. One important problem, he points out, is the need for more directly relating the instruction of the school to the practical business of the farm, through the employment of teachers in sympathy with farm life, and the enrichment of the school course by the introduction of agricultural subjects. He also favors making the common schools more thoroughly the centres of the intellectual life of the communities in which they are located, by the coöperation of the farmer and his family with the teacher. The willingness of the Agricultural Department to coöperate in the improvement of rural life through the schools is most commendable, and should meet with a hearty welcome.

Holland, Scandinavia, Germany, and France offer many valuable lessons as regards the enhancing of the efficiency of rural schools by closer adaptation to the peculiar needs of the agricultural population. Great Britain is also making an intelligent beginning in the reorganization of rural education. With us, the people of the Central States, and particularly of the farming regions around the Great Lakes, are most vigorous in pushing these problems to a solution. One recent evidence

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of the enlightened way in which a few States have taken hold of the matter is furnished by Minnesota. There the State agricultural school is, by authority of the State law, sending out charts and documents to the teachers and pupils of the rural schools calculated to make impressive the special advantages of country life and the new opportunities that are now open in the field of agriculture.

Each month establishes more clearly the increasing determination on the part of the people to enlarge the social responsibilities of the common school. The discovery has been made that there are inherent in this peculiarly American institution possibilities which ought to be exploited for the strengthening of our democracy and the inauguration of an era of peaceful coöperation. The conditions revealed by the recurring labor strikes have gradually impressed upon the public conscience the very great importance of providing suitably for the leisure time of the laboring people It is felt that the decrease of the working hours of the laboring man must be met by an adequate increase of suitable opportunities for recreation and self-improvement. The safety of society demands a speedy solution of the new problem, and the schools are called upon to cope with it. Other strong arguments for the extension of the cultural and general social mission of the schools are found in the growing recognition of the fact that it is from the armies of adults coming to us from countries in which a lower civilization prevails, as well as from those people for whom the schools have failed to provide resources to occupy the mind after the day's work is done, that the enemies of social order are recruited.

While the chief responsibility for the proper employment of the increasing leisure time of adults is coming to be fixed more and more emphatically upon the common school, private philanthropy is beginning to supply experiment stations for the development of effective methods. The most recent step taken in this direction is the endowment by Mr. James Speyer of a school on Lawrence Street, New York City, to work out some of the newer social settlement ideas of mass education. The plan of the building gives some idea of the purposes behind the enterprise. On the first floor are the office, library, and reading room; on the second and third, the class and recitation rooms; the fourth is given over to manual training; and the fifth, to the living rooms of the teachers. The distinctive feature of the school will be its development into an attractive social centre of the community in which it is located. The teachers are to visit the parents of the pupils, to form clubs, to main-

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tain evening classes and lectures, and to draw both adults and children to social gatherings. The Speyer school will be watched with interest. It certainly has set itself an aim worthy of this new age of social endeavor.

It is wonderful how rapidly the idea of making every common school the social centre of the community in which it is located has taken root. At first it seemed as if it would never pierce the indifference with which school people looked upon it. Two years ago the change took place, and now hardly a day passes that an enthusiastic endorsement of the new departure is not found in some form. Here are a few words bearing upon the subject, from the latest report of Superintendent Aaron Gove, of Denver, Colorado, who was one of the first educators to bid a hearty welcome to the idea:

> Of all late forward movements in the educational world none stands out more prominently than the disposition to provide means of education for adults as well as children. Each little community surrounds a school-house, which more and more is becoming a meeting-place for social communion — not for violent discussions, passionately uttered by partisans and extremists, but for conversation upon the many issues that confront the growing American neighborhood; not upon school questions alone, but upon every element that pertains to a new social life.

Mayor Low, in a recent talk about the state of public instruction in New York City, gave these significant bits of information concerning the tendency toward gradual enlargement of the scope of the common school:

> The use now being made of school buildings, for other purposes than the regular school work, is interesting. Vacation schools in Manhattan and the Bronx were availed of by 385,496 children; twelve evening play centres, since January 1, by 560,136; roof playgrounds, in Manhattan and the Bronx, by 305,789. Under the authority of the board of education certain outside playgrounds have been conducted, and the following figures show the use made of them. Forty-one playgrounds in Manhattan and the Bronx were used by 725,058 children; twenty in Brooklyn by 569,134; ten open-air playgrounds and six piers by 418,309. In these figures, of course, the same child is counted every time that he was on the grounds. There are also baths in one school building that have been largely used. It is clear, therefore, that the school buildings are beginning to play an important part in the life of the children, aside from their educational function.

A variety of legislation has recently been passed by Massachusetts with the double purpose of aiding towns to provide high schools and also of improving such schools. The State's policy, substantially since 1821, is to require all towns with a population of over five hundred families to maintain a free high school. The number of towns having

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less than five hundred families within their limits is 185, and it is concerning the latter that the current legislation has been passed.

In 1891, the State ordered that every town without a high school of its own should pay for the tuition of its properly qualified children in the high school of another town or city, and, should it see fit, for their conveyance also. In 1895, the State began to reimburse towns of a less valuation than $500,000 each, and without high schools of their own, for their tuition expenditures in outside high schools approved by the State board of education. In 1902, the State extended its policy of aiding in the maintenance of high-school instruction to all towns that are not required by law to maintain high schools of their own. Thus a free high-school education is open to every pupil in the State.

One feature of this legislation is that besides providing for the high-school education of all who desire it, the law aims also at the improvement of the schools. One section of the statute provides that towns maintaining a high school with one teacher only are not entitled to State aid, but they may have it by discontinuing their school. The result is that the poorer schools have been abandoned, and the combined schools are much more effective. Agents of the State board of education visit the schools in the smaller towns, and improvements are being made on the lines of the suggestions of the board. One of the principal reforms has been an increasing emphasis on the teaching of the natural sciences.

Beginning in June, 1903, Cornell University will pension all professors at the age of seventy. The plan is to have the retired professors serve as special lecturers in their respective departments for a period of five years. Their duties will be assigned to them by President Schurman. The salary for the first year will be that received at the time of retirement; after that, $1,500 a year. This happy solution of a vexatious problem will probably commend itself in a practical form to other universities and colleges.

The annual conferences at the Western Reserve University of collegiate and secondary instructors give promise of growing ever more in importance. The problem of high-school courses was the chief topic under consideration at the meeting held in the closing week of November. It was presented in the form of a report by a committee appointed at a previous session, of which Principal George D. Pettee, of the University School at Cleveland, is the chairman. Based upon the judg-

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ment of nearly two hundred teachers, principals, and school superintendents, summarized in answers to specific questions, the report outlined a programme of work in language, mathematics, history, science, and general culture, designed to cover six years, beginning at the age of twelve or thirteen. The main provisions of the report are: the division of the high-school course into two periods of three years each; no two foreign languages to be included in the same period, excepting in one or two instances; French or German to be begun in the first year, and also algebra and geometry. Latin is put off till the third year, and Greek is not included at all, assuming that the latter will be begun in college, if desired.

The preparations for the meeting of the National Educational Association at Boston in the summer of 1903 are making rapid progress. The local committee has wisely decided to have Mechanics' Hall used for all important gatherings, and also for the educational exhibit which is usually held in connection with the convention. The executive committee of the American Institute of Instruction have decided to omit the meeting in 1903, and to help centre all attractions in the Boston convention.

One of the effects of the general prosperity of the country has been to cause a scarcity of teachers, especially in the Central and Western States. The demand for intelligent workers in various lines of business has steadily increased, and these positions invariably pay better salaries than can be obtained in the schools.

Another factor in the dearth of teaching material has been the increasing demands made on the modern teacher without a corresponding increase in wages. Many of the teachers, even in the cities, do not receive $500 a year.

The lack of teachers, resulting from these conditions, has aroused the school boards to begin a movement for increased salaries. In many States the legislatures are being urged to increase the school tax in order to provide better budgets.

Dr. Emerson Elbridge White, who died October 21, at the age of seventy-three, was one of the great captains of American education whose influence has been a power in the shaping of scholastic policies. In the early years of common-school pioneering, when the normal-school idea was pleading for acceptance and teachers began to form organizations,

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his strength was felt most keenly. In his latter days he was counted among the conservatives, though he was really an educational conservator. His master mind had to be convinced by solid reasoning before he could be moved to follow a new star appearing in the firmament. He strenuously opposed every attempt at the destruction of anything his firmly-rooted judgment had found to be of real educational benefit to the school children. He had no patience with exaggerated claims and shams. His was the calm, well-informed, scholarly, judicial type of mind, so rare that one involuntarily hesitates to call it a type; in the educational world it is found rarest of all.

Dr. White's scholastic experience was varied and comprehensive. He began his career as principal of one of the grammar schools of Cleveland. His exceptional efficiency won him the principalship of the central high school. After that he was superintendent of the schools of Portsmouth, Ohio, State School Commissioner of Ohio, editor of the "Ohio Educational Monthly," president of Purdue University at Lafayette, Indiana, and superintendent of the schools of Cincinnati. He was a life director of the National Educational Association, and one of the organizers of the National Council of Education.

His latter years were devoted chiefly to literary work and lecturing. His words, calm and judicious, carried the power of conviction. He addressed in his lifetime more American teachers than any other man was privileged to do. His advice was sought in the nation and abroad. Delegated by the National Educational Association, he presented in 1866 a memorial to Congress praying for the establishment of a national bureau of education. James A. Garfield, at whose request Dr. White formulated the bill, carried it through the House by a powerful speech. In 1867 the bureau was established, for which Horace Mann and others had zealously, but vainly, pleaded for more than fifty years.

Dr. White's pedagogical books have been more widely read than any others published in this country, not even excepting Colonel Parker's "Talks on Teaching" and Page's "Theory and Practice." His text-books for elementary and secondary schools have made his name known to several generations of people.

Dr. White literally died in harness. During the summer months he was busy instructing teachers, and only a short time before his death he delivered two notable addresses.

OSSIAN H. LANG.

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EDUCATIONAL RESEARCH: CAUSES OF SUCCESS AND FAILURE IN ARITHMETIC.

In the preceding article I presented the results of a test in arithmetic. The tests had been made in eighteen school buildings, representing seven cities, and about six thousand children had participated. The figures varied enormously, and showed that for some schools the problems were comparatively easy, while for others they presented unusual difficulties. Moreover, as to merit, the results were distributed with striking regularity; the differences in the percentages obtained by the different schools of a given community being, for the most part, small. These facts may be readily recalled by a glance at the table on page 285, which is here repeated for facility of reference.[1]

That the expenditure of time and effort on the part of the pupils should be duly rewarded in some localities and very poorly repaid in others indicates that in some communities a remedy is called for. However, to be effective, the remedy must have an eye to the cause, so that our search for remedial measures must, in the first instance, be directed toward the discovery of the cause of success in some cases and of failure in others. With this in view, it will be necessary to consider the results in the light of each of the elements that enter into the education of the child, as it will not be possible in any other way to find the controlling one.

The number of factors calling for consideration is large. However, the problem may be simplified through classification; and in my former article, I showed how, in the first instance, it might be divided into two principal parts: (1) The elements relating to the pedagogical side; and (2) those of resistance offered to the influence of the teaching over which the teacher has no direct control. I then devoted the major portion of the paper to a discussion of the second part of the problem,

[1] After the publication of this table, I was informed by the principal of School 2, City VII, that he had overestimated the time devoted to arithmetic in his school; the actual time being forty-five minutes, not seventy-five. It is also to be noted that in School 2, City I, about twenty minutes daily are devoted, at school, to preparation; so that strictly speaking the time is the same as in Schools 3 and 4, City I.

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the pupils' side, and pointed out that the variations in results could not be accounted for by differences in the circumstances under which the teacher labors — differences in the home environment of the pupils, their average age, or the size of the classes; showing that the cause of the variations would have to be sought on the pedagogical side. In the present article, I shall direct attention to the latter aspect of the problem, and I believe the discussion will not be fruitless.

The pedagogical side of the problem may also be subdivided into two principal parts: (1) The factors brought into play by the teacher; and (2) the elements relating to those appointed to direct and supervise the work of the teacher. These factors will now be considered in turn.

The elements brought into play by the teacher, though numerous, may, for practical purposes, be resolved into three primary factors:

1. The time devoted to arithmetic;
2. The methods of instruction; and
3. Teaching ability, as represented by a combination of education, training, and the personality of the teacher.

The first of these points received attention in the preceding number; and it was found that the results did not bear a direct relation to the amount of time devoted to arithmetic, so that this element could not be looked upon as the controlling one. I shall here merely recall the fact that the schools whose results were satisfactory proved their ability to do creditable work with a time allotment of forty-five minutes a day, while some of the schools whose results were unsatisfactory failed in spite of a larger appropriation of time.

Since my article appeared, the point has been raised that the demand in the way of home-work may have been greater in the successful schools than in those that had failed, indicating that, possibly, in some instances, more time had been devoted to arithmetic than showed on the surface. During subsequent visits to the same schools I looked into this matter with considerable care; and I found, much to my surprise, that by far the greatest amount of home-work in arithmetic was required in City VII, whose schools had obtained the poorest results. In this locality it had constituted an important feature of every grade from the fourth year onward; the requirement in some instances being truly inordinate. On the whole, the average time devoted to it was certainly not less than thirty minutes a day. On the other hand, home-work in arithmetic was looked upon with disfavor by the teachers of all the schools that I have called successful — the first five in the table — and had been practically abandoned in nine cases out of ten.

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TABLE I.

	School.	4		5		6		7		8		School Average.			Minutes daily.	When taken.
		Result.	Principle.	Result.	Principle.	Result.	Principle.	Result.	Principle.	Result.	Principle.	Result.	Principle.	Per cent. of mechanical errors.		
City III	1	68.4	76.7	79.5	82 5	79 3	80.3	81.1	82.3	91.7	93.9	80.0	83.1	3.7	53	A.M.
City I	1	72.7	81.4	84 7	88 8	80 4	81.5	64.2	67.2	80.9	82.8	76.6	80.3	4.6	60	A.M.
City I	2	....	....	80 3	87.1	80 9	83.4	43.5	50.9	72.7	79.1	69.3	75.1	7.7	25	A.M.
City I	3	54.5	66.0	74.7	78 3	72.2	74.0	63.5	66.2	74.5	76.6	67.8	72.2	6.1	45	A.M.
City I	4	60.0	73.3	70.8	79.3	69.6	72.2	54.6	57.8	66.5	69.1	64.3	70 3	8.5	45	P.M.
City II	1	81.3	87.7	78.2	85.6	71.2	75.3	33.6	35.7	36.8	40.0	60.2	64.8	7.1	60	P.M.
City III	2	70.1	79.9	53.6	60.0	43.7	45.0	53.9	56.7	51.1	53.1	54.5	58.9	7.4	60	P.M.
City IV	1	70.5	76.4	73.3	77.7	58.9	60.4	31.2	34.1	41.6	43.5	55.1	58.4	5.6	60	A.M.
City IV	2	62.9	72.8	70.5	76.8	59.8	63.1	....	....	22.5	22.5	53.9	58.8	8.3	..	P.M.
City IV	3	59.8	72.7	65.3	73.5	54.9	58.1	35.2	38.6	43.5	45.0	51.5	57.6	10.5	60	A.M.
City IV	4	53.5	62.2	53.5	65.7	42.3	45,1	16.1	19.2	48.7	48.7	42.8	48.2	11.2	..	P.M.
City V	1	38.5	46.3	67.0	71.0	44 1	48.7	29.2	32.5	51.1	58.3	45.9	51.3	10.5	40	P.M.
City VI	1	28.1	31.7	38.1	44.2	68 3	71.3	33.5	36.6	26.9	30.7	39.0	42.9	9.0	33	A.M.
City VI	2	41.6	51.9	45.3	52.1	46.1	49 5	19.5	24.2	30.2	40.6	36.5	43.6	16.2	30	P.M.
City VI	3	36.8	54.2	55.0	62.8	34.5	36 4	30.5	35.1	23.3	24.1	36.0	42.5	15.2	48	P.M.
City VII	1	59.3	69.3	53.7	63.1	35.2	37.7	29.1	32.5	25.1	27.2	40.5	45.9	11.7	42	A.M.
City VII	2	47.4	55.2	65.4	71.4	35 2	38.7	15.0	16.4	19.6	21.2	36.5	40 6	10.1	75	P.M.
City VII	3	41.1	58.0	37.5	44.5	27.6	33.7	8.9	10.1	11.3	11.3	25.3	31.5	19.6	45+	P.M.
General average	....	59.5	69.9	69.4	75.5	60.7	63.2	39.4	42.5	49.4	51.9	55.7	60 6	8.1		
Per cent of mechanical errors	....	....	14.8	....	8.1	....	3.9	....	7.3	....	4.8					
Number of pupils examined	....	....	1,422	....	1,593	....	1,285	....	974	....	689	Total, 5,963.				

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These facts show conclusively that home-work in arithmetic is not the controlling factor in the accomplishment of results. Moreover, they ought to carry their lesson to every superintendent in the land. In view of the results and of my interviews with principals and teachers, I feel confident that home-work in arithmetic means a tax upon the time and energy of the pupil for which he receives very meagre, if any, compensation. Consequently, I wish to add to my suggestion, as to the amount of time to be apportioned to arithmetic, that the forty-five minutes daily should stand for the preparation and recitation combined.

Secondly, methods of teaching can certainly not be looked upon as the controlling element. In most schools, the methods nowadays employed are modern, though they may vary in regard to details. In some instances, special methods, based on special psychological theories, had been followed; and while the teachers who used them were, as a rule, enthusiastic in their praise, they did not seem to have proved a panacea. In the schools that passed my test satisfactorily no special methods had been in use.

There is, however, one thing in relation to the teaching of arithmetic that must be regarded as unusually important, and which should receive the attention of every educator. At one point in my investigation I had been led to believe that it was the controlling factor; but further observation compelled me to abandon the notion. The idea is this, that no new step in arithmetic should be taken until all the principles previously acquired are perfectly clear in the minds of the pupils. Where this plan is not observed, the teachers labor upon the theory that the pupils on entering a new grade are perfectly familiar with everything that had been covered in previous grades, and are therefore prepared to enter into the new work without any delay. On the other hand, where the principle is recognized, the teacher of the new grade does not take such knowledge for granted. One seventh-year teacher told me that she does not assume any knowledge on the part of the pupils beyond that of addition, subtraction, multiplication, and division of whole numbers. In such instances, the teacher, on receiving a new class, does not at once begin with the work laid down for her grade, but takes up previous work, chapter by chapter, until she strikes a weak point, where she lingers as long as she thinks necessary. Indeed, I have found a number of schools where the teachers are accustomed to devote several weeks to reviewing the work of previous grades before even touching upon their own grade work. Here progress is apparently slow; but by securing a firm foundation at the outset, the pupils are so much

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better prepared for the new work that they grasp it much more readily than otherwise, and before the end of the term the grade work is covered without any difficulty. Where the teachers proceed from chapter to chapter without any regard for previous work, the pupils are apt to sail along in a hazy atmosphere; and when taken out of their routine path, they do not know which way to turn.

Thoroughness is, undoubtedly, one of the secrets of success. Indeed, I do not see how success may be expected without it. However, I soon discovered that the review as described does not in itself insure success. Failure in spite of its adoption may be accounted for in two ways. In the first place, the review may be formal, rather than thorough, and therefore lacking in the spirit that makes for success. Secondly, the teacher's work may be thorough without stimulating thought, and the results are not satisfactory unless the pupils are capable of independent thinking. Consequently, something else is required to assure success.

The next point to claim our attention, the qualifications of the teacher, natural and acquired, is popularly regarded as the controlling one; hence the adage, "As the teacher, so is the school." However, that the variations in the results cannot be accounted for by differences in the qualifications of the teachers is proved alone by the manner in which the results are distributed. Few will take exception to the statement that marked individual variations will be found among the members of every corps of teachers. Therefore, if teaching ability were the controlling factor, the extreme variations in results should be found in the different class-rooms of the same locality. But this condition does not appear in the table, where it is shown that in certain localities practically all the results were good, while in certain other cities practically all the results were poor.

It might be argued, in explanation of this circumstance, that, in spite of individual variations, all the teachers of some communities are professionally competent, while in some others they are all incompetent. But this, again, does not accord with the facts; for if a line should be drawn across the table under, say, the seventh school, and the teachers of the communities above it compared with those of the localities below, no marked differences would be found. In all the cities represented some teachers may be found who have had both a high-school education and a normal-school training; some who have had a high-school education only; some with much and others with little experience; some with considerable and others with little natural endowment. And as to care in selection, the most favorable conditions will probably be found

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in Cities IV and VI; and still these localities failed to reach the standard.

We have now exhausted the principal factors brought into play by the teacher, as we have those that belong to the pupil, and as yet the controlling element has not been found. If my investigation is to be rewarded, the object of our search must, therefore, be found among the elements brought into the problem by those employed to supervise and direct the work of the teachers. And the facts have led me to believe that it is here that the controlling factor exists. My conviction is based on the circumstance that, in every instance, a variation in the results appears to accord with a variation in a special phase of the supervision. If my interpretation of the facts is correct, we are forced to conclude that the results secured in the average class-room do not represent the ability of the average teacher, but the response to what is expected of her; so that, ultimately, the problem of results becomes a question of demand and supply. And my deduction is this, that the teachers will supply what their supervisors demand, provided the demand be placed within reasonable bounds. A deduction of this nature is by no means an unnatural one; for it is a matter of common experience that the services rendered by a set of employees are determined by the demands of the management rather than the efficiency of the individuals, assuming, of course, that due care is exercised to see that the demands are enforced. And the facts appear to show that, in this regard, the school does not differ from other institutions.

The leading pedagogical functions of the superintendent, under an ideal system of supervision, may, perhaps, be put down as five in number:

1. The preparation of the course of study;
2. The apportionment of time to the individual subjects;
3. Offering suggestions to teachers, during meetings and visits, as to methods of teaching and the treatment of children;
4. The establishment of demands in regard to results; and
5. The testing for results to see whether the teachers are living up to these demands.

Let us now look into each of these factors and try to find the crucial point.

Owing to differences in educational ideals, the courses laid down for arithmetic vary considerably in different localities. Therefore, it may be argued that, from a comparative standpoint, the results obtained in different communities will depend upon the character of the test; that the pupils of a given locality might do well with one test and

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poorly with another, and vice versa. But, in the preparation of a test to be submitted to different localities, the objection may be allayed by bearing in mind the differences in the course of study, and, in consequence, rejecting all problems of a special character, while selecting from those belonging to general arithmetic, and which, therefore, come within the scope of every school.

The general verdict was that my problems were fair to all. Even in the localities that failed no exception has been taken to my test, which is in itself convincing evidence that the questions did come within the scope of every curriculum. Consequently, the differences in the results cannot be attributed to differences in courses of study. In some instances, it was instinctively felt by superintendent and teachers that the pupils would fail, because the questions were presented in a form differing from that to which the children had been accustomed; and, as a rule, the predictions were verified. In other localities, nothing out of the ordinary was found in the questions; and, as a rule, the schools did well. This did not indicate fundamental differences in ideals, but rather that the work of some schools was more routine in character than that of others; so that the variation in the results showed, primarily, that the pupils of some localities were more ready than those of others in the practical application of principles. In other words, the instruction had done more to stimulate thought in some instances than in others, without regard to fundamental aims.

Another point relating to the course of study also deserves consideration. It is, namely, that in some localities the ground is covered more rapidly than in others, and, therefore, that several of my problems may have come too early for certain schools. This would apply particularly to the seventh-year paper, which contained several rather difficult problems in percentage. To allay all doubts on this score, however, it will be simply necessary to discard the seventh year entirely and take the eighth year as a basis of comparison. But the differences in results in the eighth year were fully as marked as they were in the seventh; and as there was not a problem in the eighth-year paper beyond the scope of any eighth grade, this objection also becomes invalid.

The next point, the amount of time devoted to arithmetic, has been already considered, and requires no further discussion here to prove that this is not the controlling element.

The third point involves that feature of supervision which renders the superintendent an inspirer of teachers, and which, in recent decades, has been receiving an ever increasing amount of attention. In some

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localities this feature is carried so far as to convert the entire school system into a permanent training school for teachers. Here the superintendent is in constant communication with his teachers, through general and grade meetings and visits to the schools; and when he is imbued with modern pedagogical ideas, his influence on the spirit of the schools is marked, and the atmosphere of the class-room assumes an entirely different character from that which prevails in the old-fashioned, mechanical school. The relation between teacher and pupil is no longer that of master and servant, but resembles rather the relation of parent and child. This spirit is governed by the idea that the pupil is an individual who can think, feel, and act, and not merely a passive recipient of facts. There are many localities in our country where the inspirational system of supervision has been carried to its logical conclusion, and where liberty without license prevails.

But the inspiration of the teachers by the superintendent is not the controlling factor in the accomplishment of results; for superintendents' meetings and visits have been as much in vogue in the localities that did poorly as in those that did well. Consequently, the inspirational element must also be eliminated.

We have now considered all the important factors except the establishment of standards and the testing for results; and these, strictly speaking, merely represent two sides of a single element. As I have already stated, the facts tend to prove that the results are regulated by the demand; and the latter, in my opinion, is represented by the character of the tests to which the pupils are periodically submitted. *This means, in other words, that the controlling factor in the accomplishment of results is to be found in the system of examination employed, some systems leading to better results than others.*

The test, however, has two different meanings, which must not be confounded with each other. In one instance, it is intended to determine the fitness of the pupil for promotion; while in the other its purpose is that of demonstrating the rate and character of the progress made by the class as a whole, *i.e.*, whether the teacher is doing satisfactory work. As the system of testing for promotion has been practically abandoned in every city examined, this factor is common to all, and may, therefore, be here disregarded. As a rule, the pupil's fitness for promotion is now determined by the character of his daily work, supplemented by the teacher's opinion, while the examination as to fitness is reserved for those pupils whose term work has been unsatisfactory or who appeal from the teacher's adverse judgment. *The controlling element lies, there-*

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fore, in that form of examination which is intended as a test of the teacher's progress. The nature of this test varies in different localities; and, as the results appear to vary with its character, a detailed description is called for.

The tests of the teacher's progress may be conveniently summed up in four general classes:

1. Tests made from time to time by the teachers themselves. Each teacher formulates her own questions, marks the papers of her own class, and submits the results to the superintendent; but no tests are made by principal or superintendent.

2. Tests made in the same way by the teachers; but the teachers' tests are supplemented from time to time by those of the superintendent.

3. Tests made from time to time by the principals, each principal formulating the questions for his own school. The results are reported to the superintendent, but the latter does not make any tests of his own.

4. The same system of testing by the principals; but the principals' tests are supplemented from time to time by those of the superintendent.

The first system means that the demand is fixed by each individual teacher, who is made the judge of her own progress. As the questions prepared by the teacher, when left to her own resources, will naturally accord with the lines upon which she has been teaching, the tendency will be toward routine work. Under these circumstances, the minds of the pupils will be kept running in a groove, in which they may work with remarkable facility, but outside of which they are all at sea. In other words, the pupils will be able to solve certain problems without any difficulty when they are presented in the customary way, but entirely incapable of solving them when they are stated in a different manner. I was once present in a class-room when a pupil was called upon to analyze a problem in mental arithmetic. He rose to his feet, but was silent. After the teacher had waited a little while, she said to the child: "Don't you know? That's the kind that begins with 'since.'" This suggestion was sufficient to enable the pupil to go through the analysis according to rule. Such methods as this will account for the fact that a class which will regularly obtain an average of 80 to 90 per cent on the teacher's test may obtain less than 20 per cent on a test such as my own.

The plan of limiting the tests to those of the teacher has been in vogue in City VI, and the results may be judged by a glance at the table. I could find no other element in this locality to account for the failure. In fact, in every way the conditions are here above the average.

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The home surroundings of the pupils are, for the most part, favorable; the classes are small; the teachers are selected with more than ordinary care; and the superintendent does his share from the inspirational standpoint. The only thing that seems to be lacking is the test from a broader point of view than that of the teacher. If the superintendent would inaugurate a system of examinations of a different order, there is little doubt in my mind that in the course of a year or two the results in arithmetic would be improved by at least 50 per cent. In City IV also the conditions are favorable, but the testing is not very systematic.

Under the second system, the degree of success seems to depend upon the nature of the tests prepared by the superintendent. If he should not demand anything beyond a fair knowledge of the term's work at the end of the term, and if he should have an eye to principles rather than ingenuity in their application, his tests may be as routine as those of the teacher, and fail to exert a stimulating influence. This criticism applies to City VII, where the second plan of examinations has been in vogue; and when my own test was here placed before the pupils, the result was chaos. The superintendent and teachers seemed at once to appreciate the nature of the difficulty; and they feel confident that if I should try their schools again, after giving them a little chance to wake up, they would be able to show much better results. In another locality, the principal of a school that failed attributed the failure to the routine character of the tests to which his pupils had been accustomed.

Under the third system, the tests are made by the principal, instead of the teacher, thus bringing into play a broader point of view than the first plan. It has the advantage that, in the first instance, it is not the teacher herself, but the principal, who is made the judge of the teacher's progress; but, lacking the superintendent's test, the system has the weakness of making the principal the judge of the progress of his own school. This indicates simply that the tests will represent the demands of the individual principals. The principal of a given school may be petty, and guided by the desire to make a good showing, or he may lack the proper perspective. In either case, the tests may run along routine lines, with an eye to grade work, and bring forth marvellous percentages from pupils who would fail completely on tests requiring independent thought. On the other hand, the principal may be a man of broad calibre, or an original genius, whose primary aim does not exist in the endeavor to show high percentages, but in stimulating pupils to use their minds. His tests will call for independent

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thought, and they cannot be passed unless the teachers have taught the pupils to think for themselves. The percentages brought out by his tests may not be nearly so high as those obtained in the school just described; so that, in the superintendent's records, his school may stand much lower than the other. However, when a test is applied which calls for thought, rather than form, his pupils will not be mentally paralyzed, and their previous training will tell. The eighth-grade teacher of the school at the head of the table — a school where the tests are made by the principal — told me that she did not think my problems fair, because they did not test the power of her pupils. She was not at all proud of them because her class averaged 91 per cent. She thought they should have done much better than that. And she was not inclined to change her mind when she learned that the eighth grade in many of the schools did not average 30 per cent. The principal of this school is constantly after the pupils, who are, therefore, at all times, ready for the unusual.

In localities where the principal is made the judge of his own progress, he becomes a very important factor in the school system. Indeed, in one sense, he assumes the functions of a superintendent. To this there can be no valid objection; for the superintendent, especially in the larger cities, cannot come into close touch with every class-room. However, under this plan the tendency will be toward the development of great inequalities in the different schools of the same community; each school representing the proclivities of its principal, rather than those of the city superintendent.

The fourth system differs from the third in this only, that the independent tests of the principal are supplemented once or twice a year by uniform tests prepared by the superintendent. Here the principal is not left entirely to his own resources, but, from time to time, is himself subjected to a test. The advantage of this plan lies in the fact that it is capable of bringing to light the comparative progress of the different schools, which is not the case when the results reported to the superintendent from the various schools are based on tests of varying degrees of difficulty. The knowledge on the part of the principal that his school is to be judged by tests other than his own cannot fail to exert an influence on the nature of the tests prepared by himself, which will be guided by the character of those submitted by the superintendent. If the latter call for independent thought, the principals must see that the teachers will train their pupils to think; otherwise their schools will not be likely to make a good showing. Even under these conditions some

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of the schools will fail, because the principals themselves are not equally competent or equally ambitious; but the tendency will be to stimulate those who are ambitious, and who wish to stand well among their colleagues. Therefore, the best principals of the town will be likely to do better work, and among the less competent the number of failures will be smaller. This system of examination describes, in a general way, the plan in vogue in City I.

In the foregoing I have attempted to point out, first, why some schools succeeded in passing my test and others failed; and, secondly, what mode of procedure, according to the facts, is destined to lead to the most favorable results. However, I do not wish to convey the impression that I claim to have solved the educational problem. I fully believe that my data, though comparatively meagre, justify the deduction that, other things being equal, the results obtained by the teacher will vary with the demand, which simply shows a further application of a very well recognized fundamental law. Further investigations may prove that I am wrong, and that the controlling factor is an altogether different one.

But taking it for granted, for the sake of argument, that my deduction is correct, this does not indicate that I have really solved the problem. If we are willing to accept the statement that the results are controlled by the demand, we are simply carried to the threshold of another, and much larger, problem. Assuming the organization of a school system to be ideal, that is, that the principal is broader than his teachers, and that the superintendent is broader than his principals, then the deduction is logical that it is fitting for the demand to be fixed by the superintendent. This, however, merely leads us to the question, What principles shall guide the superintendent in formulating his demands? He must ask neither too much nor too little of his teachers. If he asks too much, the consequence will be a waste of effort in the attempt to do the impossible. On the other hand, if he asks too little, the pupils will not be sufficiently taxed to develop the best that is in them.

But how is the superintendent to determine the mean? Thus far no higher law has been recognized than that of personal opinion; so that all standards now in existence are purely arbitrary in their nature. Nevertheless, there is a higher law, and one which will have to be brought to bear on the educational problem, if permanent progress is looked for. The law is this, that the demand must be based on the normal mental capacity of the child, that is, on a knowledge of what

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the average child[1] who has been well taught is capable of doing in an individual branch, at a given period of school-life, when a given amount of time has been devoted to that branch. This is not a question of opinion, but a question of fact, a problem whose solution depends upon extended investigations.

If we look over the pedagogical field to get our bearings from the standpoint of the mental capacity of the child, we can find as yet no definite landmarks to serve as guides in the establishment of standards. Under these circumstances, the superintendent's demands cannot be representative of anything more definite than his personal opinion — a condition that must necessarily prevail until a more or less substantial literature on the child's capacity has been developed. In the meantime our educators must resort to expedients; and, for the present, the wisest course, it seems to me, lies in the adoption of a system of examinations as outlined in plan number four.

However, the mere inauguration of a fruitful system of examinations does not itself insure success. As I have already stated, the nature of the results will be determined, for the most part, by the character of the tests prepared by the superintendent. If the problems do not call for independent thought, and if they can be solved without any difficulty should the teacher have devoted her entire attention to drilling the pupils in the work of her own grade, then the tests of the principal will follow this lead, and the examinations will be as routine in character as those which are made by the teachers themselves, in accordance with plan number one. To be of the highest value, the superintendent's questions must be suggestive and stimulating, both to the principals and the teachers. They must aim to take the latter out of the groove, and be so formulated that they will call for a thorough grasp of the entire subject as far as the pupils have advanced, as well as a readiness on the part of the latter to comprehend a problem that comes within their scope, regardless of how it is stated. When I say that the standard implied by a test of this nature is not an impossible one, and that its attainment is purely a matter of training, I am not merely expressing a personal opinion, but I am speaking from actual facts — as witness, in the table, 81 per cent against 8 in the seventh year, and 91 per cent against 11 in the eighth.

A further illustration of the same fact was given a few weeks ago

[1] Recognizing that no two individuals are alike, some educators take exception to the term "average child." However, there can be no objection if we accept it in a figurative sense, taking the class as a unit.

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when I submitted an apparently simple, but rather puzzling, little problem to the pupils of the eighth year of a number of schools. In one instance, where the pupils had failed on my general test, the class average on this little problem was 10 per cent only. I asked the teacher how she accounted for the failure, and her reply was: "Children don't think." If she had spoken more truly, she would have said: "These children don't think," or "My pupils have not been trained to think;" for, in another instance, in the school that stood first on my general test, the class average on the same problem was as high as 60 per cent. It might be argued that, perhaps, in the one school the pupils had previously had problems similar to the one I gave, while in the other they had not. This is just the point. If not, why not? In some schools it is difficult to find practical problems that are not in line with previous work; and, therefore, almost any practical question seems quite familiar to the pupils. But in other schools the pupils seem to be able to look in one direction only, so that questions from other points of view represent to them merely so many Chinese puzzles.

The conclusion that the controlling factor in the accomplishment of results is to be found among the duties of the superintendent may be open to the criticism that I started out with a theory, and that, in interpreting my data, I was influenced by the desire to prove my theory — a form of criticism to which investigators are not infrequently subjected. However, to this charge I must enter the plea, "Not guilty." That I have had, for some time, a rather strong leaning in a certain direction, I will not deny. But my belief was that the variations in the results were due, primarily, to differences in the personality and qualifications of teachers — a theory which the facts compelled me to abandon. And I did not see what I now believe to be the controlling factor until every element I had mentioned had been critically examined and found wanting.

It is gratifying to me to be able to say that the facts were not interpreted in the light of the conclusion, but that the conclusion was formed in the light of the facts. Nevertheless, when I recall my educational experiences of a decade ago, I am somewhat surprised that my impressions did not favor, from the outset, the theory to which the facts have led me. In January, 1892, after spending considerable time in studying the school systems abroad, I entered into an agreement with THE FORUM to visit the schools of our own country, and to prepare a series of articles embodying my observations. I started out early in January of that year, and travelled continuously for over five months, during

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which time I had an opportunity to visit schools in session in thirty-six cities, and to consult a large number of superintendents, teachers, and others more or less directly interested in education. At the end of that period I felt that I was ready to express some opinions, and the publication of my series began in October, 1892, and did not close until June, 1893.

It was not my purpose at the time to study the results of instruction, but rather the spirit of the schools. I had long believed that elementary education should take into account the normal activities and interests of the child; that the latter should be introduced to the beauties of nature and art; and that he should be as free in his schoolroom as orderly development would permit. From the standpoint of spirit and breadth of curriculum, I found all sorts and conditions of schools. In many localities, the sitting-still school, with all its mechanical appurtenances, still flourished; in some, the endeavor to break away from the old-fashioned, mechanical grind was in evidence; and in not a few instances I found localities where my idle fancies had been more than realized.

The most striking feature of my observations was the fact that, from the standpoint of spirit, any one school of a given locality was, broadly speaking, representative of the schools of its locality as a whole. When the repression of the child was found in the first school that I visited, it was found in the other schools as well; and, in the same way, when in the first school I found spontaneity, it was an indication that I should find freedom in the other schools also. This was strong evidence to the effect that the spirit of the schools of every locality must be controlled by a central authority; and the accumulated data led me to the conclusion that the tone of the class-room was representative of the personality of the superintendent, provided he had had charge of the schools long enough to make his personality felt. And this conclusion, I believe, has stood the test of time. The term superintendent is here used in the larger sense, which includes the members of his staff.

From the deduction stated the inference is natural: "If the superintendent is responsible for the spirit of the schools, why is he not also responsible for the results?" If the superintendent wishes to develop a good school spirit, it is necessary for him to work for spirit. If he is desirous of accomplishing results of a high order, it is necessary for him to work for results.

In view of what I have said, the aim of supervision is clearly a double one. In the first place, the superintendent must see that a

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wholesome spirit is developed in the schools; and, secondly, it is also his duty to see that due attention is paid to results. This again gives rise to an important question: Is it possible to keep the results in view without at the same time crushing the spirit? Or, conversely, Is it possible to develop a delightful class-room atmosphere without at the same time destroying the results?

Judging by my own impressions, acquired by a two-fold study of the question, spirit and results are in no way incompatible. The criticism aimed at the modern school spirit, that it means a milk-and-water system, a weak sentimentality rather than mental discipline of a wholesome kind, does, perhaps, apply to the schools of those localities where the mere utterance of the word "results" is looked upon as sacrilegious — schools that are in a transitional stage, just emerging from an antiquated system, and not yet accustomed to their new surroundings. But the criticism does not apply to localities where a good spirit has already become an established fact, and additional aims can be held in view without losing sight of the fundamental proposition. In itself, a good school spirit does not indicate weakness any more than a poor spirit is an indication of strength. In some of the delightful schools, it is true, the results are by no means praiseworthy; but, on the other hand, the results are frequently of a very inferior order in typical schools of the antiquated kind.

There is, indeed, no logical reason why results may not be kept in view without in any way neglecting the spirit; for "subjects" are taught in the modern as well as in the antiquated schools, and the time devoted to the formal studies is, in most instances, ample to lead to satisfactory results. If the modern idea should stand for the abandonment of the three R's, it might be deemed unworthy; but it does nothing of the kind. The matter simply resolves itself to a question like this: "All other things being equal, will forty-five minutes a day devoted to arithmetic in the schools in which the pupils are active and responsive accomplish as much as forty-five minutes devoted to arithmetic in the schools where the pupils are repressed and passive?" The facts compel us to answer this question in the affirmative. Therefore, there is no reason to doubt that a good school spirit and satisfactory results may without difficulty go hand in hand. J. M. Rice.

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WATERWAYS: AN ECONOMIC NECESSITY.

It is a well-recognized fact that the greatest nations of the world have always been those that excelled in commerce, and hence the struggle for supremacy in international trade continues to this day to be a vital issue.

Strenuous efforts have been made to amend our navigation laws in such manner as to encourage the restoration of our merchant marine, which was almost annihilated in consequence of the civil war; and yet over ninety per cent of our foreign deliveries are still made in alien bottoms at an annual charge sufficient to pay for the Isthmian Canal. Legislation does not respond with sufficient alacrity, and recourse is therefore had to financial and business combinations whereby ships may be transferred to American control, even though still required to sail under foreign flags. These movements in the shipping world are viewed with anxiety by our competitors, yet they are the logical outcome of the economical conditions which confront us.

But vessels alone do not create trade. It must spring from the productive capacity and labor of an industrious and intelligent people, and must be aided by the greatest possible facility of distribution, as determined by the cost. No nation is enriched by hoarding its surplus in warehouses or vaults, or in permitting prohibitive tariffs or physical obstacles to obstruct its path. Since all these matters are the legitimate subjects of legislation, the responsibility for their existence or removal must rest largely with the lawmakers.

The persistent opposition, so frequently manifested in legislation adverse to the improvement of the waterways of the country, is attested by the inability for more than half a century to secure the passage of an enabling act for an Isthmian canal, by the decadence of the canal mileage of the United States during the same period, and by the failure of the Government to keep pace with the demands of commerce in the improvement of rivers and the opening of harbors. The works already recommended as meritorious and necessary exceed in value three hundred millions, while the annual appropriations seldom reach one-tenth of this large aggregate.

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In view of the great and manifest economies of waterways it may seem inexplicable that, with but few illustrious exceptions, their advantages have apparently not impressed themselves upon railroad managers and legislators in general. By the recognition and use of these economies, the most progressive nations of the European continent have been able to maintain large military and naval establishments, besides providing from the public treasury for the construction and maintenance of their extensive systems of internal waterways, while the United States has permitted her canals to become gradually extinguished.

One by one these earlier avenues of communication have been absorbed and abandoned; and yet statistics show that the cost of transportation by these artificial channels is about one-third only of that by rail, while by open water it is still lower. A nation that ignores an economy of sixty-six per cent in transportation is wasting its resources and imposing onerous burdens upon its people. The possibilities of this country are magnificent; and yet but few of them have been developed, and in these cases the work has been done largely by private corporations or local interests. The Erie Canal still exists, a monument to the enterprise of the Empire State of which it has ever been the backbone; but it is becoming too weak to bear the greatly increased tonnage, and must be strengthened and enlarged unless it is desired to divert the traffic to the down-grade route through Canada. Owing to the growth in the dimensions of vessels, the antiquated coast-wise system of canals, made necessary as a means of defence by the lessons of 1812, is no longer able to pass more than about three per cent of the trade of the contiguous bays and sounds. These channels barely pass the smallest torpedo-boats, and are wholly inadequate to meet the requirements of an interior, strategic line as an indispensable part of our coast defence, not to mention those of the millions of tons of coastwise commerce, only awaiting their enlargement and national control.

The great work nearing completion under the State of Illinois, connecting Lake Michigan with the Illinois River and having in view the ultimate creation of a fourteen-foot channel to the Gulf of Mexico, is one that must commend itself to the country as being of immeasurable value. The connection of the vast deposits of coal in Western Pennsylvania and Virginia with the iron ores of the Lake Superior region by means of a ship canal across the portage separating Lake Erie from the Ohio River should be pushed with the utmost dispatch.

That these and many other possibilities, which were outlined and formulated in ante-railroad days, have not received the encouragement

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which their importance deserves is due to the impression that the internal commerce could, and should, be handled by rail. But the facts and experiences of a century demonstrate the inability of the latter to compete successfully with the water rate. Hence the war of extermination goes on by every known process. As an illustration of how it is done, it may be stated that not many years ago a State Legislature enacted a law to encourage the construction of canals, but stipulated, in the act, that no canal should be more than three miles in length, nor should it pass through any borough, town, or village. The law contained other absolutely prohibitory provisions. Another State has passed laws prohibiting the enlargement of its canals to sufficient dimensions for "ships." In many instances, bridges have been erected for the express purpose of obstructing the navigation of streams.

Under such conditions it is not surprising that the development of our internal waterways languishes, since it is not the policy of our Government, as such, to initiate works of enlargement or improvement. The first steps have to be taken by local and private interests, and are invariably opposed by the many other demands for appropriations from the public treasury in aid of works already in progress, as well as by hostile transportation managers. As the tonnage supposed to be necessary to justify an appropriation is not already developed, the request is usually tabled and the project strangled.

The waterway has two well-recognized effects upon railway revenues; and it is because of the failure of the railroad managers to weigh their relative importance that so much misapprehension and opposition have arisen. The first effect of a waterway upon a railway is to reduce the tariff. It is generally assumed that such reduction entails a loss of revenue. It must be remembered, however, that the income from traffic is the product of two variables, namely, the tonnage and the tariff. These are so intimately related that as the one factor is increased the other is generally diminished. Thus to increase the rate will, as a rule, diminish the quantity of freight carried, and *vice versa*. It has been a well-recognized transportation maxim to charge "what the traffic will bear" instead of reducing the rate to a profitable minimum to stimulate business. This latter policy was proposed by the general superintendent[1] of the Pennsylvania Railroad as early as 1853. His estimate was as follows:

A charge of one cent per ton mile on an increased business of 500,000 tons carried 200 miles would pay a net profit of five per cent on $10,000,000. . . . But even if

[1] Herman Haupt, who afterward became its chief engineer and one of its directors.

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this business did not pay a dollar of revenue, my opinion is that it would be to the interest of all parties that it should be accommodated, as it would give employment to a large population and stimulate other important interests.

At that time the business of the company did not exceed a quarter of a million tons, and the mere suggestion of trebling this seemed visionary in the extreme. To-day it approximates 100,000,000 tons, a large portion of which is profitably carried for less than one-half cent per ton-mile.

Thus low rates create traffic; and whatever tends to this result, provided there be a profit, is beneficial to the railroads as well as to other interests. Deep-water competition is an important element in securing this end. Its influence on the general prosperity of the country is amply shown by the following extract from the Senate Report of the Committee on Commerce, made by Senator William P. Frye, in 1892, when, in speaking of the commerce of the Great Lakes, he said:

> No other distinctive type of commerce has contributed more to our industrial development. It has created a means of transportation costing to-day only one-ninth the cost of the same service by rail. . . . The ton-mileage of the lake marine for 1890 was 18,849,681,384 ton-miles, or about 27.5 per cent of all the railroads of the United States. At the average rail rate, say, of nine mills it would have cost $169,647,132; but at the lake rate of 1.2 mills it was approximately $22,619,617, or a saving of $147,027,514. . . . The total expenditure for water improvements of the lakes has amounted to about $30,000,000, or approximately one-fifth of the annual saving effected in transportation. . . . Our waterways have acted as the most powerful regulators of rates. . . . When it is considered that a diminution of the freight charges of one mill per ton on the railroads of the country effects a saving of nearly $100,000,000 to the shippers in transportation, the value of this restrictive power cannot be overestimated.

By such statements of fact the general benefit of the waterway is established; but it must also be proved that the railroad interest is not injured. For this purpose it is only necessary to direct attention to the fact that the financial condition and the tonnage of those lines which are most seriously affected by this alleged competition are far better than those of lines so remote as not to be within reach of its benefits. More frequently it will be found that the first companies to succumb to a depression are those cross-country lines which have no water competition or terminals, while those that are more favorably situated in this respect not only survive but continue to earn their dividends. Their securities are at a premium, as the daily quotations will attest.

The reason for this apparent paradox may be more fully set forth by a brief analysis of the character and value of the tonnage carried by each system, and a consideration of the amount of "margin" between

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the cost of production and the market price of any commodity which may be available for transportation. This margin is the controlling factor in determining how far and by what route the particular commodity may reach its market. It fixes its market-range. For a given margin, the lower the rate the greater the radius of distribution; but it often happens that the margin is so narrow and the tariff so high that the commodity cannot be moved at all, and must be utilized at the point of production or be destroyed, as when corn is burned for fuel or oil is wasted at the wells, because of prohibitive or discriminating rates. To illustrate this law in a general way, the appraised values of various groups of commodities carried on the New York State canals, during a period of sixty years, have been tabulated. The average value of each class per ton is found to be as follows:

Forest products, $10.95; agricultural products, $37.82; manufactures, $37.03; merchandise, $307.50; other articles, $15.29; average of all tonnage, $38.45. The distribution by canal in 1897 was, 25 per cent of forest products, 22 per cent of agriculture, 0.04 of manufactures, 0.07 of merchandise, and 42 of other articles.

These figures show the great divergence in values of the several groups of commodities, as well as the almost insignificant amount of the higher class freight carried by the water route. In short, 67 per cent of the movement by the canal system of New York is confined to articles valued at less than $16 per ton, and, of the remaining one-third, 66 per cent consists of agricultural products of relatively low value. These statistics fully confirm the statement that the low-grade freights take the water routes, and the high-grade the rail routes. The obliteration of the canals will not give their supposed competitors more revenue, but will either require them to carry at a loss to keep the wheels of industry revolving or to stop them altogether.

Similar conclusions are derived from an analysis of the business of one of the largest of our trunk lines crossing the continent, from which a detailed statement of traffic was obtained. These data showed that only 2.7 per cent consisted of forest products; 34 per cent of agricultural or animal products; 37 of manufactures and merchandise; and the balance, 26.3, of miscellaneous and mineral products. In other words, the volume of the tonnage bore a direct relation to its value, the greatest tonnage being that of the highest value.

The market range of any commodity is mainly determined by the cost of overcoming the resistances to its movement; and as these resistances are less by water than by any other medium, the water route possesses innate physical advantages that cannot be ignored without loss.

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As vessels cannot navigate shallow channels or sail over dry land, it frequently happens that hostile interests oppose the improvement of the waterway, with the hope that the existing traffic, if any, may be diverted to the overland way. This antagonism has been more clearly developed in the efforts to secure a passage across the isthmus than at any other point, but only because of the more important interests affected.

The value of a farm or mine depends not only upon its productivity, but also upon the cost of transportation to market; for if this latter item exceed the margin of profit there will be no return for the labor. Hence the character of the way becomes an important factor in fixing the value of property. Thus, on a common earth road the average cost of hauling a ton one mile, as determined by the Agricultural Department of the Government, is 25 cents; the average of the railroads of the United States is but 0.72 cents, or 7.2 mills per ton-mile; while the rate by canal of limited draught is but 2.4 mills; and by the lakes a small fraction of a mill only.

On this basis the market range of the different groups of commodities over the several systems of ways may be most succinctly presented in tabular form, assuming that one-half its value is available for transportation charges. This is more than it should be, but the results are merely illustrative of the relative importance of the resistances.

LIMITS OF MARKET RANGE, BY WAGON, RAIL, OR WATER.[1]

Commodity.	Margin.	Earthroad.	Railroad.	Canal.
		Miles.	Miles.	Miles.
Forest product	$5.50	22	764	2,293
Agricultural product	19.00	76	2,640	7,920
Manufactures	18.50	74	2,570	7,710
Merchandise	153.00	612	21,250	63,750

This exhibit reveals at a glance the enormous advantages of a low water rate and a large margin, and also shows, on the other hand, the almost prohibitive cost of the common road rate, which is about thirty-three times more expensive than that by rail, and about one hundred times more than that by water. It suggests the possibility of greatly increasing the territory tributary to the railroads by their taking an active part in the rapidly growing movement for better roads; by so improving their grades, alignment, surface metalling, and drainage as to reduce these resistances to a minimum, thus converting barriers into feeders. Realizing

[1] From "The Highways of Commerce," by the writer; published in the Proceedings of the International Good Roads Congress at Buffalo, Bulletin No. 21, United States Department of Agriculture.

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its importance, some of our most prominent railroad presidents have already entered into this work with excellent results, under the guidance of the Good Roads Association and with the active coöperation of the Road Inquiry Bureau of the Government.

But if the improvement of the common roads is found to be an important auxiliary to the business and revenues of the railroads, why should not that of the waterways be still more so and for the same reasons? The waterway does not merely withdraw the low-grade, bulky freight from the railroad; it also contributes to it the high-grade output of the factories located on the waterpowers of this and foreign countries.

Only a small portion of the 800,000,000 tons of traffic carried annually on the railroads of the United States originates directly at the way stations. It must first be hauled from the farm, mine, mill, or forest over an earth road at an average cost of 25 cents per mile. If the average distance to the station be but four miles, the cost of transportation, even before delivery, will be $800,000,000, while the charge at the market end of the route for storage and delivery may readily swell this sum to over a billion dollars annually, most of which goes to cover a preventable waste constituting a gross extravagance.

Under existing systems of administration, the highway and railway may be built or improved by private or corporate capital whenever or wherever the exigencies of the service may warrant the expenditure; but this liberty no longer continues to exist with reference to waterways. Since the civil war the control of rivers and harbors has been transferred to the military arm of the Government, which claims exclusive jurisdiction over all navigable waters and those which can be made so. This condition necessitates legislation, requiring strong sectional influences, *pro rata* distribution, and great patronage, before the requisite appropriations can be secured. Even then the latter are frequently inadequate to complete the work economically.

Unlike almost every well-conducted business enterprise, there is no competition for plans; nor are payments based upon results secured or maintained. The principal requisites appear to be a desire on the part of the member from the district in which the appropriation is to be expended, and the indorsement of the army engineers. These conditions necessarily exclude plans which may be regarded as competitive because of their originating from unofficial sources. No improvements have therefore been undertaken by private enterprise, for many years, in this class of civil works, excepting the few which have been directly authorized by Congress, at the contractors' risk. These were looked upon as

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experiments. They, however, were entirely successful, and fully justified the precedents thus established.

In the last River and Harbor Act some discretion was conferred directly upon the Secretary of War to modify the plans in certain localities where only tentative estimates had been submitted as a basis for appropriations, and also where the plans were to be determined as experience and experiment should suggest, as the work proceeded. The Secretary is also authorized by the Act of 1888 to apply the money for rivers and harbors "by contract or otherwise as may be deemed most economical and advantageous to the Government"; also "where said works are done by contract, such contract shall be made after sufficient public advertisement for proposals, in such manner and form as the Secretary of War shall prescribe," etc. Under these provisions of the law it would seem that the Secretary is now authorized to secure results by the use of such plan or means as may be deemed by him to be the most economical and advantageous to the Government. Thus it may be practicable, in the exercise of this sound discretion, to open the door to competition and secure tenders based on results, so hastening the opening of our commercial channels for the benefit of all interests.

The region of the Great Lakes, as Senator Frye has said, furnishes the most instructive object-lesson on the face of the globe of the benefits conferred by cheap water competition. This is not merely the result of modern centralization; for as early as 1848 Col. J. J. Abert submitted to Mr. Marcy, then Secretary of War, a report on "The Commerce of the Lakes and Western Rivers," in which he referred to its probable increase in these memorable words:

> It is difficult to approach this part of the inquiry without fear of appearing to exaggerate. Those who knew these lakes thirty years ago, and who know them now, will admit that existing facts have baffled human anticipation, and that the wildest speculations of the imagination have been more than realized in the vast increase of their commerce. Then, if we examine into the elements of this increase, we can perceive no reason to expect a less energetic action of these elements for many years to come than has been realized in the past.

This was prior to the opening of any of the railroad routes between the lakes and the seaboard. The Erie Canal, the great artery of communication, was opened in 1826, from Buffalo to Albany, 502 miles, with a capacity of only 5,000,000 tons carried in seventy-six-ton boats. The railroads aggressively entered this territory to secure a portion of the business. The New York Central became a trunk line in August, 1853, by consolidation of nine local companies, the first of which, the Albany and Schenectady, was opened on September 12, 1831. The Hudson

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River Railroad was not opened until October 3, 1851, as an outlet to the Central. The "Erie" also was opened to Dunkirk on April 22, 1851. It is a cross-country route and is 18¾ miles shorter than the one following the waterway; yet this latter has the advantage in tonnage by more than sixty per cent, and in recent years additional through tracks have been acquired to meet the increased traffic.

Prior to the opening, by private enterprise, of the Sault Ste. Marie Canal to Lake Superior in 1855, Henry Clay opposed a grant of land in its behalf on the ground of its being "beyond the pale of civilization if not in the moon." The original canal had a draught of 12 feet only. The traffic the first year was 106,296 registered tons. Its average annual increment on this draught for twenty-six years was 56,014 tons. On September 1, 1881, the "Weitzel" lock was opened at a cost of $2,404,116, with a depth on its sills of 17 feet and draught of 16 feet. Under this stimulus the average increment was raised to 921,526 tons, and it was soon manifest that the capacity of the locks would be exceeded before the increased facilities could be provided. On September 9, 1895, the Canadian Canal was opened, with a depth of 21 feet, and having a lock 900 feet long and 60 feet wide, emptied in less than five minutes, merely by pressing an electric button. It cost about $4,000,000. On August 3, 1896, the present "Poe" lock, of the same depth, was opened at a cost of $2,790,658. These additional facilities raised the increment to 2,721,704 tons annually, so that the latest reports give the total cargo movements, during the short seasons of about seven months, as over 28,000,000 short tons.

It is not surprising, therefore, that in January, 1891, Gen. O. M. Poe, then in charge of the work, emphasized the statement of Col. Abert by declaring:

> For thirty-five years I have watched the increase of the Great Lakes commerce, but neither I nor any one else has been able to expand in ideas at the same rate. The wildest expectations of one year seem absurdly tame by the side of the actual facts of the next.

The first was a prediction; the second, its fulfilment. Could it have been true if there had existed no such waterway, and the country had been compelled to depend upon overland movements by rail? Most assuredly not, for the lake rate in bulk has been at times less than one-twenty-fifth of that by rail and has stimulated an enormous traffic which the railroad could not have handled without loss.

The comparative rates in cents per bushel on wheat from Chicago to the seaboard may be briefly stated as follows:

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	Lake and canal.	Lake and rail.	All rail.
1868	16.23 cents.	20.76 cents.	30.49 cents.
1897	4.35 "	7.37 "	12.32 "

From this statement it appears that in 1868 the rates by all water were nearly half those by all rail, and that in 1897, notwithstanding the great economies introduced into overland traffic, the ratio was still further reduced to about one-third. This reduction has not been found to be detrimental to the railroads skirting the lake shores; and it is admitted by the presidents of both the New York Central and the Canadian Pacific railroads that the waterway is beneficial to the interests which they represent.

In 1896, Senator Chauncey M. Depew, then President of the "Central," wrote:

> I have always thought the existence of the Erie Canal a benefit to the New York Central Railroad, and have therefore favored every movement which liberalized its management or promoted its interests.

It is wisely urged that these highways of interstate commerce be acquired by the general Government under its right of eminent domain, and be emancipated from tolls and enlarged to meet the demands of modern vessels.

But the benefit of waterways is not confined to the railway interests only. It affects all industries and classes, and is most clearly manifested in the influence on the prices of prime necessities. This may be best shown graphically by marking on a map the average farm price of wheat in each State for the past decade, and observing the relation which that price bears to the geographical position of the State and its avenues of transportation to the seaboard.

For example, in 1901 Kansas had 5,355,638 acres in wheat and produced 99,079,304 bushels, while Nebraska, its neighbor, planted 2,456,543 acres, yielding 42,006,885 bushels. The yield per acre in Kansas being 1.4 bushels greater than in Nebraska, the price in the former State under the law of supply and demand, should be lower; on the contrary it is five cents higher. The principal shipping point in Nebraska is Omaha, on the Missouri River, 492 miles, by rail, from Chicago, and 412 from St. Louis, on the Mississippi, whence the rate on wheat in bulk by water to New Orleans is but one mill per ton-mile. The principal port of Kansas is Kansas City, also on the Missouri, but about 230 miles lower down. From this point to Chicago by rail the

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distance is 458 miles, and to St. Louis 285 miles. Kansas City therefore has a shorter rail haul to Chicago by 34 miles, and to St. Louis by 129 miles, and it is 230 miles nearer the low water rate to the gulf. As the yield per acre was 18.5 bushels, this gain of five cents would represent a revenue of 92.5 cents over the price in Nebraska; and had the entire State been sown in wheat this profit, due to proximity to water routes, would have aggregated nearly $50,000,000. On the actual wheat crop it was $4,953,965. Kansas also has the advantage of nine cents per bushel on her corn crop of 61,506,034 bushels, giving a gain over her neighbor, on the yield, of $5,535,543. For her oat crop she received, in 1901, six cents more per bushel than Nebraska, so that her increased revenue from this source was $1,039,944. On these three products of the soil, therefore, had they all been shipped abroad, Kansas would have saved on her freight bills $11,530,000 in the last year. Conversely, at the same differences per bushel on the farm, Nebraska would have lost on the value of her crops about $14,267,000, because of her geographical position. This, if capitalized at three per cent, would, it is believed, exceed the total expenditures on our rivers and harbors. Yet the Missouri River Commission was abolished because the results secured did not appear to justify the appropriations.

Were our railroads more wisely administered they would invest their own surplus in the improvement of the rivers of the country, and thus raise the value of the farm and mineral products for their own general benefit as well as for that of the community they serve.

It is a significant fact that the local price of wheat, and hence the value of the farm, rises as the water routes are approached. This is clearly set forth by tracing on a map of the United States the curves of equal values, in convenient intervals, say of five cents each. Thus, the average price of wheat for the last ten years, so arranged, shows that the region of lowest farm price (51–55 cents) includes the easterly parts of the Dakotas, Nebraska, and Kansas. The 55–60 cent belt envelops this region, and includes Minnesota, Iowa, Western Missouri, etc.

The next zone, reaching to 65 cents per bushel, takes in Wisconsin, Illinois, and other sections. Seaward of this are located Indiana, where the value is 65.6 cents, Kentucky with 66.9, Michigan with 67.6, Ohio with 69.2, West Virginia with 73.9, Pennsylvania with 71.9, Maryland with 72.9, New Jersey with 76.1 on the sea, and New York with 78 cents on the farm. At Baltimore city it is quoted at 76 cents and at New York City at 80 cents, but these quotations include other charges than transportation.

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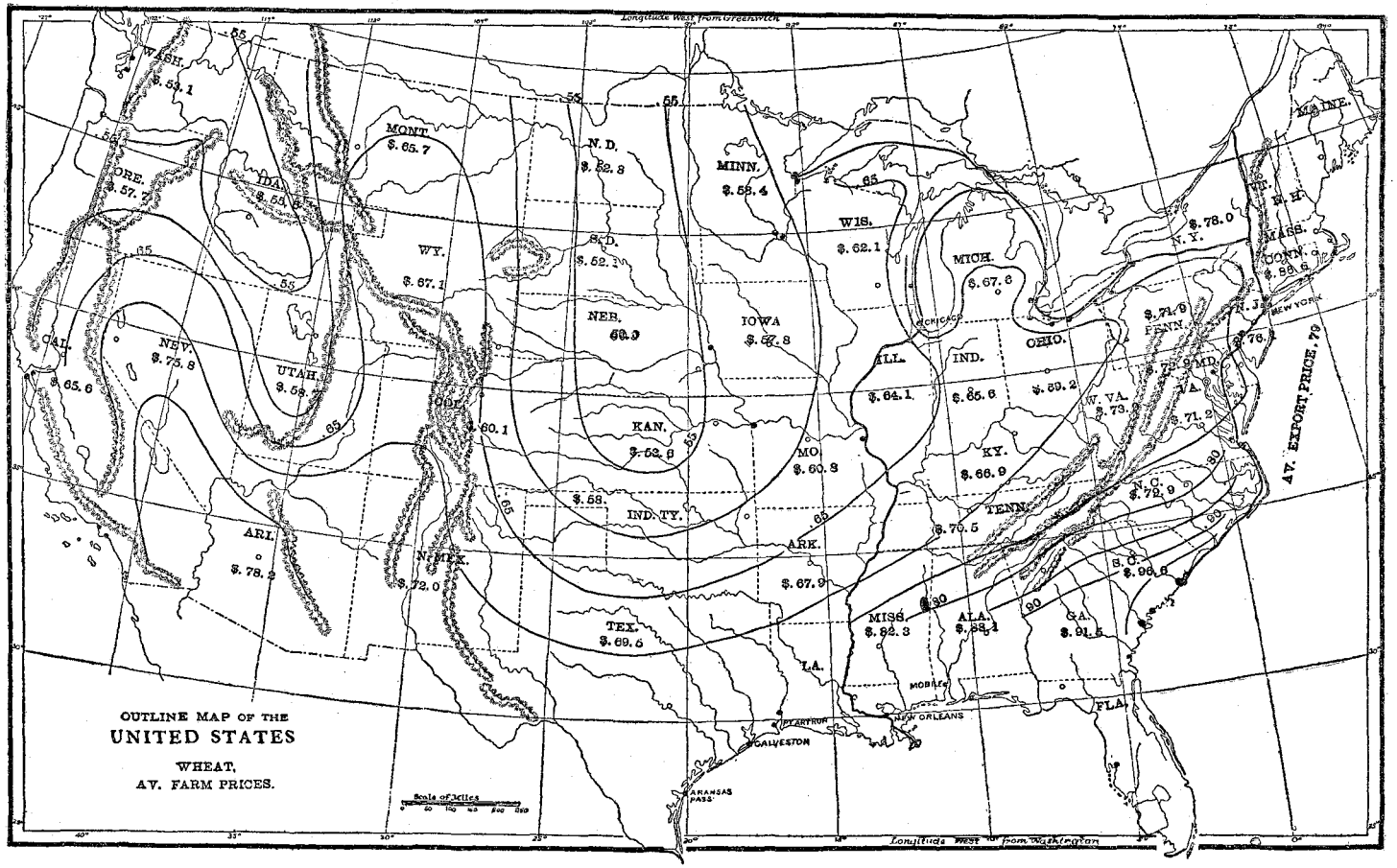

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Proceeding down the Mississippi and along the gulf littoral, the figures illustrate the same law. Thus, Missouri gives 60.8 cents per bushel, Kentucky 66.9, Arkansas 67.9, Tennessee 70.5, Louisiana none, Mississippi 82.2, Alabama 88.1, Georgia 91.5, South Carolina 96.6 (the maximum), North Carolina 79.9, and Virginia 71.2.

The Columbia River basin, with Puget Sound, is a region of low values reaching up to the Salt Lake basin; while the Rocky Mountain belt is one of relatively higher prices, largely because of its isolation, home consumption, and the greater cost of production due to the absence of water. The climax is reached in Arizona at 78.2.

It is not contended that geographical position alone fixes these average values, which are functions of so many variables; yet the striking unanimity with which they increase as they approach the seaboard and the correspondingly greater profit this confers upon the producer are suggestive of the important part which improved waterways take in the national economy. It serves to impress the oft-repeated statement that there is no other appropriation made by the Government which returns so large a profit as that for the improvement of our rivers and harbors.

The economies advocated in this article may be still more generally and speedily secured by broadening the policy of the Administration, so as to invite competition for plans and authorize the letting of contracts for prices based upon the enlarged channel dimensions to be secured and maintained. With the waterways brought up to modern requirements the general prosperity of the country will be greatly stimulated, and the three systems of transportation — highways, railways, and waterways — will be mutually benefited.

LEWIS M. HAUPT.

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THE PASSING OF THE AMERICAN INDIAN.

After four centuries, during which he fiercely resisted, sullenly resented, and at last passively acquiesced in the gradual encroachments of civilization, the American Indian now finds himself face to face with the always inevitable, but long deferred, absorption by the white race. The hour of his elimination is at hand. It is practically certain that another year will see his final disappearance from among the nations of the world, his identity forever lost under the broad mantle of United States citizenship.

It is doubtful whether all history affords a more picturesque figure than the one thus passing from view, or another whose form is obscured by such a haze of fiction and romance. A vast majority of the people of the United States, to say nothing of residents of other countries, have to-day scarcely more than the slightest conception of the real Indian. To them he is still a creature with gaudy blankets, paint, and feathers, a model for the startling cigar-store sign. What must be the disappointment of the idealist and sentimentalist to find him, after all, turning out to be a plain, every-day American citizen, with the ideas and aspirations of such a being? Yet, when one sums up the elements of his character and strikes the average, that he remains — no more, no less.

The five principal civilized tribes — Cherokees, Creeks, Choctaws, Chicasaws, and Seminoles — numbering, in round numbers, some 85,000 people, represent the tangible remnant of the aborigines of North America. Some scores of minor tribes still exist after a fashion, generally by means of direct governmental support, in various parts of the United States, Canada, and Mexico; but all such have long ago lost every semblance of tribal autonomy, and must be classed among the melancholy human relics left over from a barbaric age. To this class belong the nomadic Apaches, Comanches, and Arrapahoes, still clinging to their wigwams and inherited ideas of dress, in Western Oklahoma, New Mexico, and Arizona, always within sight of a military post.

A cursory glance at the facts of history disposes of this Indian as representative of what remains of his race. After three hundred years

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of intermittent warfare between the white settlers and the Indians, the beginning of the last century found but five tribes east of the Mississippi River still capable of interposing effective opposition to the Westward movement of the whites. These were what are now known as the five civilized tribes. The fact that they were still formidable, in face of the growing strength of their opponents, is substantial evidence of a more powerful national spirit and political cohesiveness than was ever displayed by the Northern tribes. In the main these nations, for they deserve to be called nations, were not inimical to their white neighbors. They steadily refused to be led into the constant broils which devastated the Northern frontier, and fairly maintained the spirit of their treaties. When Tecumseh endeavored to include them in the Indian coalition for a final effort to expel the invaders, they displayed, in declining the overtures of the great sachem, a mental balance which is habitually associated with considerable capacity for government. In the bloody wars which constant pressure upon their national boundaries finally brought, these tribes displayed such courage and efficiency as for years baffled the military power of the United States; and although ultimately defeated, they succeeded in preserving their national existence.

Although defeated, they still enjoyed the respect of their conquerors; for when time showed the advisability of removing them to lands beyond the Father of Waters, we find the United States reverting to diplomacy. It is interesting to note that three-quarters of a century ago, and, indeed, until quite recent times, our Government regarded the five tribes as belonging to the world's family of nations. The treaties for their removal were negotiated directly by the State Department through special commissioners, signed by the President, and approved by the Senate. Throughout the negotiations there was no suggestion that the United States was dealing with inferior powers. All the forms of international intercourse were observed. The five nations, taking under their wing several weaker tribes, carried with them into the West their national autonomy, and have there preserved it until the wonderful growth of the country has made assimilation a necessity of practical politics.

One marvels at the shortsightedness of statesmen who, only seventy years ago, considered that they had disposed of the Indian as a discordant element in our national development by locating him a short distance west of the Mississippi River, near the geographical centre of the present area of the United States. That it was so believed, the language of the treaties, clearly indicating the purposes of the Government, shows. There is no doubt that all the parties to the treaties considered the arrangement

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final. The Indians moved, and settled down quietly on their new possessions, which they found a fair land. The discontent incidental to the abandonment of former homes soon passed away, and the nations set about organizing a better form of government.

One by one the five tribes adopted constitutions copied closely after those used by the States. It is somewhat difficult to-day for millions of Americans to realize that for over thirty years the five nations have been living under a form of government almost exactly like that enjoyed by the people of the States. The tribal governments are all vested in three coördinate branches — executive, legislative, and judicial. For many years English has been the language of the courts, legislative bodies, and schools; although interpreters are still provided in the courts and legislatures for the benefit of those who cannot speak except in their native tongue. The United States Indian Agent, until quite recently, occupied a position analogous to that of the British Resident in a native state in India. The supervision of the United States was not nearly so great as that which it exercises over the Territories.

Scarcely, however, had the tribes set their new homes in order than their dream of a happy isolation was dispelled. The tide of emigration had set relentlessly westward, and would not be stayed. In the course of years, notwithstanding the efforts of the United States to prevent them, thousands of white settlers, tempted by the evident fertility of the country, entered the Territory and "squatted" on any vacant lands they liked. At first the United States made a feeble attempt to expel these invaders; and, had the tribal governments been urgent, this might have been accomplished. But the majority of the Indians were rather disposed to welcome the intruders. There was plenty of land, and there was no strenuous objection to the newcomers remaining if they behaved themselves. So the whites stayed, intermarried with the Indians, and became citizens of the various nations. All the tribes except the Creeks passed laws admitting the intermarried whites, or "squaw men," to full citizenship. So came about a state of things that has reduced the "full-blood" element to about fifteen per cent of the total tribal citizenship.

This extraordinary, though, under the circumstances, not a surprising, condition has naturally wrought decided alterations in the physical and mental characteristics of the Indians. The racial situation has been further complicated by the injection of another element. At the time of the great removal, many of the Indians owned negro slaves, which they took with them on their journey westward. After the civil war these slaves were freed, and all who returned to the Territory within

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a given period were entitled to tribal citizenship. In some of the tribes negroes have intermarried with the Indians, so that it is not uncommon to find persons who can boast a triple racial ancestry. In other tribes, notably the Cherokee, alliances with negroes are discountenanced, and, in social matters, the color line is rigidly drawn. It is not, therefore, surprising that the Indian is in a fair way to lose his racial identity. The situation is aptly illustrated by the comment of a recent settler in the Territory. "As near as I can make out," he said, "the Indians seem to be divided into two general classes — white men and negroes."

In fact, a casual traveller through the Territory, confining his observations to the beaten path, can hardly escape this impression. At a social assemblage in one of the many handsome residences to be found in the principal towns, one finds it impossible to distinguish persons of Indian blood, although many may be present. Hundreds of Indians of both sexes have been graduated from the best colleges in the United States, while thousands have received an excellent education at the academies built and maintained by the tribal governments. A legal fiction permits a person whose strain of Indian blood does not exceed a sixteenth or thirty-second to claim tribal citizenship, which, in communities where all land is held in common, no one neglects to do. One drop of Indian blood makes an Indian under the tribal laws. Every child whose veins contain that drop owns its *pro rata* share in the tribal estate. Moreover, many men are technically Indians who have not even a single drop of Indian blood. In this category belong the "squaw men" who have intermarried into four of the tribes. Thus, the Indian of to-day is a composite type, not to be readily distinguished from white or colored citizens of New York or Massachusetts.

There are, however, the full-bloods, of whom some twelve or fifteen thousand remain. The full-blood displays the physical characteristics of his race; but he long since adopted the white man's dress, and, with his hair trimmed, he may easily pass at a glance for a negro. Of course, there are obvious differences under close inspection, as in the hair and lips. While many full-bloods are equal to the white Indians in intelligence and education, a majority have been backward in embracing the white man's civilization. As a rule, the full-blood avoids the larger towns, and makes his home in the rougher parts of the country, where game may still be found, and where he can enjoy a measure of the isolation he still covets. There he builds his house, usually an unpretentious log cabin, and lives much after the manner of poor whites in the mountains of Arkansas, Kentucky, or Tennessee. His habits are probably best

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described by the word "shiftless." He is content to have enough for the needs of to-day; to-morrow can take care of itself. Mr. Frank C. Churchill, special Indian inspector, who within the last two years has travelled the Territorial byways, and obtained a comprehensive knowledge of the manner in which the average full-blood lives, thus describes the conditions at one of the full-blood habitations where he was entertained:

> The dinner consisted of fat bacon, corn bread, and canned corn. My host, who was extremely hospitable, owned hundreds of acres of fine land, which he did not cultivate. The corn on the table was brought from Vinita, forty miles distant, and required a three days' journey to fetch it. Plenty of corn and fresh vegetables might have been had by cultivating a garden patch. My host owned a large herd of fine cattle, yet we had neither butter nor milk. Eggs would have added much to the culinary department of the household, yet I saw no fowls about the place. A New-England farmer, situated like this Indian, would grow rich in a few years. This man was content with his poverty because he was unconscious of it.

It must not be assumed, because the full-blood is backward, that he is making no progress. On the whole, his industrial and social condition is better than that of hundreds of thousands of white Americans. He sends his children to school, and himself takes a keen and tolerably intelligent interest in the political affairs of his nation. He takes as naturally to a republican form of government as a duck to water, the undoubted result of centuries of tribal rule based on the same general theory. With few exceptions, he is attached to his home and profoundly law-abiding. Yet, theoretically, he is a "Ward of the Nation."

I confess I am puzzled by the reasoning, undoubtedly indulged in by a vast majority of the people of our country, which still insists on distorting the American Indian who resides in the Territory into a "question." Let me repeat that such Indians as are not negroes are practically white men, a great majority in blood as well as habit. The tribal languages are spoken by a few thousand full-bloods only, and are rapidly dropping into disuse. Another generation will probably see all full-bloods speaking English. The "freedmen," or former slaves of the Indians, now constitute fully twenty per cent of the total tribal population. During the civil war most of the slaves ran away, a majority going into Kansas. After the war, on being admitted to tribal rights under condition of immediate return, they flocked back in great numbers, and, being versed in agriculture, settled on much of the best land in the Territory, where they have multiplied and prospered. Strangely enough, these very negroes and their descendants, who, had they remained across a geographical line, would have been endowed thirty-five

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years ago with full citizenship, are now, after a generation of successful self-sustenance, generally considered unfit to exercise the functions of self-government. And the masters of these former slaves, then and now of an intellectual and moral superiority sufficient to hold the negroes in subjugation, must also be regarded as incompetent to manage their personal affairs. By some singular process of reasoning, they are assumed to need a guardian, a position exercised by the United States in a spirit of benevolent paternalism.

But people born on this continent entertain, as a rule, certain inherited prejudices against too much paternalism on the part of the government. If a citizen of the Indian Territory — it is well to remember in this connection that "Indians" only are legally citizens, though many white men and negroes are legally "Indians" — wants to sell certain of his property, or dispose of his estate, he deeply resents any paternalism which interferes, and he considers his resentment to be justly founded on broad relations of the government to the individual. Studying conditions on the spot, one cannot escape the conviction that the present administration is paternal to a mischievous degree. The intention is excellent; but it is the same old story of one man trying to run the personal business of some other man, with the same old result.

Lacking all desire to criticise the Interior Department, which has control of Indian affairs, I, nevertheless, cannot avoid the subject in any article that pretends to give a comprehensive view of Territorial affairs. The policy of the Interior Department is, to all practical purposes, the policy of the United States. I found among whites and "Indians" alike an almost unanimous disposition to condemn the methods of the department in handling the present remarkable situation. That much of this criticism originates in disappointed self-interest I have no doubt. Neither do I doubt that most of it is based on just grounds. The residents of the Indian Territory undoubtedly have much to complain of. Without reciting particulars — and I might cite instances by the score — it sums up all criticism to say that the difficulty seems to be too much formality at Washington, and too little of what Westerners call "horse sense."

Within the last few years, actuated by the prevailing belief that anomalous conditions in the Territory were quickly to be settled by Congress, thousands of homeseekers have entered its boundaries. Cities have sprung up; hundreds of miles of railroads have been built; and thousands of acres have been placed under cultivation. All these enormous improvements, valued at tens of millions of dollars, are based on

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insecure tenure. Land cannot be purchased — that is, valid titles cannot be secured — or good leases obtained. All the land belongs to the Indians in common, and they are not permitted to sell. The Indians are willing to sell or lease, as the case may be, whenever the Government will permit them. Meanwhile, the tremendous energy of a population of 400,000 people is either bottled up, or can expend itself only at a risk which is altogether unjustifiable. As it is impossible to bottle it entirely, it takes the risk. This country will be a lawyer's paradise for the next twenty years. Huge buildings are rising on land to which there is no valid title or lease; crops are being sown in fields from which the sower may be evicted any day; coal mines and oil fields are being opened by capital that lives in daily expectation of being told to move on; water-works, electric railways, and lighting plants are being constructed in cities that cannot boast a charter; and business enterprise is flowing in a hundred remunerative channels. The wheels of government may halt, but progress does not. The detriment, however, is incalculable. I heard the Interior Department referred to everywhere throughout the Territory as the "circumlocution office." A wonderful country, throbbing with all the energies of progress, is being strangled with red tape.

There is little to criticise in the general scheme of the Government for the settling of conditions in the Territory. It is slowness of procedure that irritates, and this slowness is largely due, it seems, to a disposition at Washington to grant no finality to the acts of the Government's officers in the Territory. Congress has delegated certain powers, which were undoubtedly designed to be final, to commissioners; but the Interior Department has so construed the laws as to give it the right of revision. Under existing methods, this supervision generally means that the work must be done two or three times before it is finally accomplished. Few residents of the Territory can mention the Interior Department without "cussing."

Years have now passed since Congress began to realize that the tribal governments must be merged into the Union. However, this could not be done without first dividing the lands among the Indians. To accomplish this a special commission was appointed which, taking its name from the chairman, has been known as the Dawes Commission. Since its creation in 1893, this commission has kept steadily at work. It has been confronted by a stupendous task. Imagine the labor and judgment required to administer an estate of 30,000,000 acres of valuable land, to distinguish some 85,000 legitimate heirs out of 200,000 claimants, and

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to divide the estate equitably. First, it was necessary to negotiate, with each of the five nations, treaties providing for allotment. This has finally been accomplished, except with the Cherokees, who have rejected several treaties agreed upon by their commissioners. The difficulty arises, however, from no disinclination to accept the inevitable, but out of questions of method. Innumerable important matters must be dealt with and a solution found. Apart from individual interests, all the nations have spent great sums in government buildings, schools, and public improvements, of which some proper disposition must be made. The work broadens as it advances. New questions arise every day, requiring clear judgment and great executive ability. It is the fashion in the Territory to criticise the slowness of the Dawes Commission; but it is difficult to see how the work could have been accelerated without the employment of a larger working force. The blame for not providing a larger force rests with Congress; while even such expedition as the commission has been able to manifest has been in a large measure nullified by detrimental methods employed by the Interior Department.

A single illustration may emphasize the retarding influence of present departmental methods. A person who desires to be enrolled as a citizen of one of the five tribes is required to file an application with the Dawes Commission, setting forth his claims to be included on the roll. A day is set when the commission will hear testimony for and against the claimant. As all kinds of fraudulent claims to citizenship are made, it is necessary for the tribes to employ counsel to examine closely the qualifications of every claimant. It thus frequently happens that voluminous testimony is taken in a single case; and often the tribes are compelled to secure evidence in other States, at considerable expense and difficulty. At length the commission passes on the case, and accepts or rejects the claimant. This should end the matter, for the commission has all possible opportunities for arriving at the facts. The decision must, however, be approved by the Secretary of the Interior, who, of course, reopens the whole matter. This is done with the best of intention, but such methods scarcely come within the scope of practical administration. Given finality in the work it was created to do, the Dawes Commission, with an adequate working force, would have finished its labors before now. It is composed of men of high standing and ability, who are entirely competent to determine all matters that come before them. Theoretically it is perhaps well for the Interior Department to exercise a check over the commission; but common sense would demand that this check be not exercised with such minuteness as

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to impede progress. Think of the labor and time required to review 200,000 such cases, to say nothing of the expense.

The testimony at enrolment hearings before the Dawes Commission is often amusing. A large percentage of fraudulent claims are set up by negroes. All such claimants have one idea firmly fixed in their minds — that they must have returned to the Territory not later than 1866 to come in under the treaty admitting "freedmen" to citizenship. An old negro man or woman will swear that he or she belonged before the war to a citizen of one of the five nations, and that he or she returned in 1866. This establishes a *prima facie* case of citizenship. Cross-examination by the tribal attorney will develop something like this:

"To whom did you belong before the war, uncle?"
"I belong to Marse Jones, suh."
"Which Mr. Jones?"
"Jes' my Marse Jones, suh. Das all I know."
"Where did he live?"
"He live over close to Tal'quah, suh."
"Who were your neighbors, uncle?"
"I don' 'zac'ly 'member no neighbors, suh; but I 'members dere was some."
"Well, what kind of a house did Mr. Jones live in?"
"I don' 'zac'ly 'member 'bout dat house, suh. Never pays much 'tention to houses."
"But you ought to remember something about it."
"Oh yes, suh, I 'members de house perfec'ly; but I can' 'scribe it 'zac'ly. Twuz jes' like houses folks gen'ly lives in, suh."
"Do you remember the big spring where the family got water?" [There was no such spring.]
"Yes, suh, I 'members dat spring perfec'ly."
"Had a stone spring house, didn't it?" [There was no such house.]
"Yes, suh, I 'members dat stone house."
"Did you run away during the war, uncle?"
"Yes, suh."
"Where did you go?"
"I went to Kansas, suh."
"When did you come back?"
"I come back in sixt'-six, suh."
"In eighteen hundred and sixty-six?"
"No, suh; I didn't say nothin' 'bout no eighteen hun'erd. De yeah sixt'-six when I come."
"How do you know that you came back in sixty-six, uncle?"
"How I knows it? I jes' knows it; dat's all."
"But how can you tell what year it was?"
"'Cause I knows it was de yeah sixt'-six."
"But how do you know it wasn't sixty-five or sixty-seven?"
"Don' know nothin' 'bout dem yeahs. I knows I come back in sixt'-six."
"Do you know what year this is, uncle?"
"Dis yeah? I ain' got no time kep trac' ob all de yeahs."
"Do you know what year last year was, uncle?"

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"Ain' I tell you, suh, I ain' got no time be foolin' wiv yeahs. I got my fambly to suppote."

"Well how does it happen, uncle, that you can't remember any year except sixty-six?"

"'Cause I don' pay no 'tention to no yeah 'cep sixt'-six, suh. Dat's de yeah I come back in."

And so it goes. The claimant will probably support his testimony by that of his wife and any number of his friends, all of whom will swear that he returned to the Territory in "sixt'-six." It frequently happens that on the validity of one such claim will depend the citizenship of a horde of children and grandchildren. The necessity for rigid scrutiny of these claims is obvious.

Even more puzzling than enrolment is the allotment of the common estate. If this vast estate were in money or securities, a division among the heirs would be a simple matter. But here it consists entirely of land, land of widely varying character and value. How to divide this land so that each heir will obtain his proper share, in value, and no more, is surely a proposition that might well daunt the most astute commissioners. Here again paternalism has stepped in to complicate the situation. A widespread impression prevails that the Government uses its power over the destinies of the Indians to their disadvantage. No more mischievous idea ever gained currency. As a matter of fact, the Government is hampered in facilitating a settlement by "too much conscience." It is so afraid that somebody will take advantage of the Indians that it will not let them divide their property to suit themselves. The Indians desired to divide the land by the very simple plan of giving each man his and his family's share of the land he was living on, and partitioning unoccupied land among those who had no regular place of abode. A paternal Government, however, quickly discovered that, as a majority of the full-bloods, who care little for agriculture, were settled on the poorest land, they would lose by such a partition. It mattered not that such an arrangement suited the full-bloods perfectly. The Indian is attached to the place where he has always lived, and where his children were born. Under such a plan it would have been merely a matter of equally dividing the land. But the Government said the poor full-blood should not be cheated. There must be an equalization. And so the commission is trying to equalize. The land has been divided into grades, and appraisers are endeavoring to fix their comparative value. They are succeeding, perhaps, as well as may be. Does the Indian appreciate this protecting care? Not he. Old Chief Esparhecher, of the Creek nation, himself a full-blood, and a man of strong intelligence, has considered

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the attempt to equalize a foolish move. In discussing the question with Col. D. M. Wisdom, ex-Indian Agent, he put the matter aptly thus: "What do the full-bloods care about the character of their land? They only want it to walk over."

As a matter of fact, no equalization will really equalize. If agricultural advantages were the only element of value involved, it might be possible to arrive at a tolerably equitable division. But clearly that is only one of many elements of value that enter into land. Land may be valuable for many reasons: because it covers oil, coal, or precious metals; because of adjacency to a growing city; because a railroad runs across it, and so on. Land which is relatively of superior value to-day, in comparison with other land, may not be worth half as much next year. The comparatively valueless hills of the eastern part of the Cherokee nation, or the arid wastes of large portions of the Choctaw nation, may, within a few years, through discovery of mineral deposits or other natural, but now undeveloped resources, become sites of great cities. Who can say that the remotest parts of the Territory will not in a decade be the most valuable? This boasted equalization, which is costing the Government hundreds of thousands of dollars and greatly delaying a settlement, is in reality a farce. It lies not within the wisdom of man to devise a scheme of equalization that will truly equalize.

While the Dawes Commission has been at work, other steps have been taken looking to the gradual substitution of the authority of the United States for that of the tribal governments. The first step in this direction was the abolition, four years ago, of the tribal courts. Tribal courts were corrupt and inefficient, but these are failings characteristic of courts in many other countries. The presence in the Territory of a large number of whites, over which the tribal courts had no jurisdiction, necessitated the establishment of United States courts. The inevitable clash of jurisdiction resulted. A few years of the dual system showed that one or the other must give way. This naturally, and properly, meant that the tribal courts must go. The change occasioned considerable discontent among the Indians, but they acquiesced quietly in the transition. Four years of practice have fully demonstrated the wisdom of this move. Even the Indians would not now go back to the old system, if they could.

The tribal executive and legislative branches still continue to exercise their constitutional functions, but under the suzerainty of the United States. The sessions of the various legislatures are conducted with decorum, and under standard rules of parliamentary procedure. In-

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dians of all degrees of blood mixture have always displayed remarkable aptitude as politicians. Indian legislatures are no more corrupt, if they are more open in corruption, than similar bodies in many of the States; while they are models of probity compared to such bodies in some of the smaller republics of this hemisphere.

While absorption by the United States is inevitable, it must not be assumed that the tribal governments were failures. Under them the Indian made great material and mental progress. The five tribes have spent more money *per capita* on public education than many of the surrounding States. Not only have common schools been established, but handsome and spacious colleges of higher education have been built, and maintained on a high plane of efficiency. There are a dozen colleges in the Territory that will compare favorably with similar institutions in the States. The tribes have defrayed, out of the public funds, the expenses of young Indians at the great universities of the country, on condition of their afterward teaching in the tribal schools for a term of years. It must be borne in mind that the United States did not build and maintain these schools. Their establishment was entirely the work of Indians, and the funds came from the tribal revenues. Some tribes even went so far as to appropriate money to pay the board of children, in order that they might attend school.

On the face of the school statistics of the five nations, the Indians make a showing for education which can put many of our States to shame. But a close inspection of conditions shows that the Indian school system is not all that its statistics seem to indicate. The higher branches are well cared for, but there is still a great need for common schools. Even the academies are so crowded that it often requires a political pull to secure admission for a boy or girl. However, the school advantages of the Indians are so immensely superior to those enjoyed by white residents of the Territory that shame closes the mouth of criticism. To this matter I shall return later.

Standing on the threshold of United States citizenship, the American Indian feels a variety of emotions and entertains a variety of views. It is no exaggeration to say that four-fifths of the tribal citizens regard the prospect with confidence and hope. A vote would show an overwhelming majority in favor of the change, and the sooner the better. Unfortunately, this sentiment is not unanimous. A majority of the full-bloods, or perhaps one-tenth of all the "citizens," desire things to remain as they are, or rather, to revert to the status before abolition of the tribal courts. Sift this desire, and one finds it to be a mixture of senti-

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mental clinging to the past and misconception of the future under new conditions. Nevertheless, it exists, and it recently made its existence known in a movement which was not without a certain sentimental pathos.

Chitto Harjo, better known as "Crazy Snake," a full-blood Creek Indian, is one of those who prefer to live as his forefathers lived. Being a man of considerable influence among the more ignorant full-bloods, and something of an orator, he began an agitation to secure the restoration of full tribal authority and the expulsion of the whites from the Territory. He soon brought to his way of thinking several hundred Creek, Choctaw, and Seminole Indians, and this nucleus set about organizing a government, spoken of in derision as the "Snake" government. In the summer of 1900, a large number of full-bloods of these three tribes assembled at Hickory Ground, in the Creek nation, and proceeded to form a government. Before taking this step they had sent a delegation to Washington to see the Great White Father. There the delegates, having no authorized standing, were not received by the Interior Department; but they fell into the hands of a lawyer who advised them that under their treaties with the United States they had a right to reëstablish their ancient laws and customs.

It is sentimentally interesting to note that the whole "Snake" movement was founded on the unwavering faith of the Indians that the United States would observe the letter of the removal treaties, which promised them a "permanent home" in the new country "as long as grass grows and water runs." Confirmed in their opinions by the mischievous advice of their attorney, they elected tribal officers and established the seat of government at Hickory Ground. Late in 1900 the administrative processes of this government began to grind. Several offenders under the laws were arrested and punished. Up to this time the United States officials in the Territory, while watching the progress of the "Snake" movement with curiosity and amusement, had given it no serious attention; but these developments, which were widely heralded by the press as "Indian outrages," made interference necessary.

The United States Indian Agent at Muskogee notified the "Snakes" that their proceedings were contrary to law, and that they must disband. Governor Porter, of the Creek nation, also took action to suppress them. United States Marshal Bennett issued a proclamation ordering the Indians to disband and go to their homes. These orders were obeyed, and it seemed that the "Snake" movement had been crushed. Within a few weeks, however, the "Snakes" reconvened, and issued a proclama-

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tion notifying the President of the United States that they intended to prevent allotment of the tribal lands, and would drive all white men from the Territory unless they peaceably withdrew. The progressive Indians became alarmed, and appealed to the United States to suppress the disorders. A detachment of Indian police despatched by Agent Schoenfelt to disperse the assemblage of "Snakes" met with a show of resistance, and withdrew. It was then decided to take vigorous measures. Marshal Bennett asked for a troop of cavalry, which was sent from Fort Reno, Oklahoma. The "Snakes" were dispersed without bloodshed by the troopers and a force of deputy marshals; and ninety-four of the principal men were arrested and placed in jail in Muskogee. When arraigned for trial before Judge John R. Thomas, they all pleaded guilty, and were discharged on promise of good behavior. However, after remaining quiet for several months, the agitation was resumed, which led to the prompt arrest and imprisonment of the leaders. Thus ignominiously ended what will probably be the last organized attempt of the Indians to preserve their tribal autonomy. It is significant that for many years no military post has been maintained in the Territory, and that the troops were sent there on this occasion merely for moral effect. They were withdrawn immediately after public apprehension had been allayed. "Crazy Snake" is poor material for a hero, and is introduced here merely because he and his cause point a moral in the passing of the Indian.

The antagonism of some of the Indians to the coming change manifests itself in a reluctance to enroll themselves as citizens. By failing to enroll, they foolishly expect to delay allotment indefinitely. Every effort has been made by the Dawes Commission to induce these Indians to enroll; and in the event of their continued refusal to do so there will be no alternative but to close the rolls without them. It is likely, however, that a paternal Government will make some provision for these obstinate people. Even allotment, when it is finally accomplished, will be hampered by restrictions. Within a certain limit of time, no Indian can dispose of his property, and a small section of land will be inalienable for at least a generation. Let sentimentalists not strain their tender feelings over the wrongs that allotment is going to inflict upon poor Lo. In some of the small tribes that are grouped in the northeastern part of the Territory, the land has been allotted for many years. The result is that the Indians are enabled to lease their land to good tenants, and can live comfortably on the proceeds. Under present conditions in the Territory, where no valid leases can be obtained, the better class of white

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farmers will not cultivate under such precarious tenure, so, as the full-blood will not cultivate it himself, much of the land produces nothing.

One thing remains to be considered — the condition of the white residents of the Territory. These now number over 300,000, and are increasing every day. There is no evidence that the condition of these people is of particular concern to Congress, although their situation is worse than that of the inhabitants of Porto Rico or the Philippines. I have already mentioned the palsied business situation. Of this the worst may be believed. Nearly all the actual progress is directly due to the presence of the whites. There is no way of getting them out of the country, and nobody, except a few reactionary full-bloods, wants them to go. They are needed. Yet their own Government, to which they must look for relief, persists in regarding them as unwelcome interlopers, and turns a deaf ear to their entreaties.

There are to-day in the Territory 90,000 white children of school age, growing up without even rudimentary educational advantages. This state of affairs will continue until Congress is aroused from its singular apathy and grants some form of government to the Territory. The white children cannot attend the Indian schools, and other schools cannot be created in the absence of any government empowered to levy taxes for school purposes. Children of residents of the towns attend schools which their parents have built, and which are maintained by private subscription; but scattered farming communities cannot secure even this form of relief. Some attend schools established by missionary societies for the enlightenment of the Indian, now turned aside to become missionaries to the Indian's more ignorant white cousin. Every day grown white men and women appear in the courts who can neither read nor write. White residents of the Territory who are in the third generation of illiteracy are common enough, but you will not find many such Indians. Congress cannot plead ignorance of this appalling state of affairs.

Sooner or later allotment is coming. Then what? Undoubtedly Statehood or a regular Territorial form of government. Opinion in the Territory is divided as to which is preferable. There are many who think the country is hardly ripe for Statehood; others are in favor of taking the plunge at once, and getting settled once for all on the final basis. Adjustment is a simple question of practical politics. Either alternative means the elimination of the American Indian as an "Indian." And, heartily sick of being a "ward," he is prepared to face the future hopefully as an American citizen.

THOMAS F. MILLARD.

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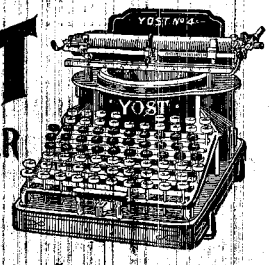

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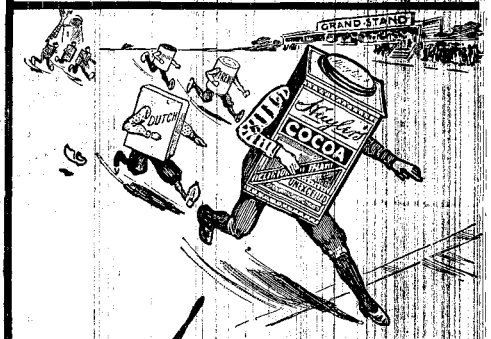

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